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Regional and State inequalities in educational opportunity are reported from an extensive study based on data from the October 1965 Current Population Survey of the U.S. Bureau of the Census regarding the home and school environments of approximately 27,000 persons between the ages of six and 19 in a national sample of households. Major phases of the report include (1) the role of the public school in the equalization of educational opportunity; (2) modernization and education within American society; (3) an open-systems approach to social organization; (4) the American public school as an open social system; (5) regional, metropolitanizational and social class variations in American society; (6) theoretical considerations; (7) background of the school context study; and (8) modernization context as related to the organizational structure, organizational inputs, and the production throughput and output of American public schools. The study concludes that efforts to attain equality of educational opportunity in the schools can be achieved only to the extent that educational inputs, outputs, and functions are determined by policies and practices which perceive this end as a significant part of the school's institutional role. (JK)

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Institute for Social Research
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Tallahassee, Florida

January 1969

U. S. DEPARTMENT OF
HEALTH , EDUCATION, AND WELFARE

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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U. S. DEPARTMENT OF
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Preface

Historically, the study of the school *as a social organization* has been a neglected area of empirical inquiry. Although many reasons exist for this apparent oversight, of particular importance has been the tendency of past analysts of the school to utilize conceptual models derived from primarily economic or social psychological assumptions. In such instances the results have been disappointing from a sociological perspective, for the fundamentally social nature of the school as a formal organization has been overlooked.

This report seeks to avoid this limitation by advancing and testing an exploratory model of the American public school as an open social system in a highly modern and heterogeneous society. In applying the model to the issue of equality of educational opportunity we have focused on the potential impact of the sociocultural environments of schools upon their structure and functioning. Our results suggest that the issue of environmental effects on the school is no longer one of whether the sociocultural context influences the school as a social organization, but rather of what aspects of this context have an influence and in what form that influence is expressed.

The approach which we have used has been quite eclectic. Although we are sociologists, our view of the school as a social organization has borrowed heavily from general systems theory which had its origin approximately two decades ago on the frontier between biology and physics. In conceptualizing the sociocultural contexts of schools we have drawn largely from a cross-cultural perspective developed by anthropologists and economic geographers to compare societies, not social units within a single society. Our methods of data collection and analysis have been primarily those of large-scale survey research which until recently have been applied almost exclusively to the individual as the unit of analysis, rather than to a collectivity such as the school. The statistical methodology which we have employed is a form of multivariate regression analysis utilized primarily by economists. Throughout this endeavor our major objective has been to synthesize existing theory and method in order to understand better the nature of the American public school as a social organization.

The School Context Study which constitutes the empirical portion of this report (Chapters Nine through Twelve) had its origin in the Civil Rights Act of 1964. Section 402 of that legislation directed the United States Commissioner of Education to conduct a survey of inequalities of educational opportunity related to racial, religious, and ethnic characteristics of the American population. To accomplish this a national inquiry with a sample of approximately 650,000 pupils in grades one, three, six, nine, and twelve was carried out during the 1965-66 school year under the direction of Professor James S. Coleman of Johns Hopkins University. In addition several smaller studies were conducted to investigate the question of inequality of educational opportunity in ways not possible within the larger study.

The School Context Study is a byproduct of one of these smaller studies, an inquiry conducted at Florida State University by Charles B. Nam, A. Lewis Rhodes, and Robert E. Herriott under contract with the U. S. Office of Education (OEC5-99-150). In accordance with that agreement the October 1965 Current Population Survey (CPS) of the U. S. Bureau of the Census was supplemented to obtain detailed information regarding the home and school environments of approximately 27,000 persons between the ages of 6 and 19 in a national sample of households. We are greatly indebted to the Bureau of the Census for their aid in the collection of these data, and to our colleagues, Professors Nam and Rhodes, for their assistance in making the school data available to us for this project.

The present report has been completed under the auspices of the Center for the Study of Education, a division of the Institute for Social Research at Florida State University. We are indebted to the institute director, Professor Charles M. Grigg, for his assistance in our endeavor.

The research was initiated under the jurisdiction of the Institute of Human Learning at Florida State University and we are particularly grateful to its director, Professor Russell P. Kropp, for his efforts in obtaining financial support for our research and for the many additional forms of facilitation which he offered during the past three years. Without his aid and nurturance this work would neither have materialized nor have been completed.

We also received able assistance from the members of our research and clerical staffs. We are particularly indebted to James L. Morrison who supervised both the extensive data processing required by the project and the preparation of this report. Richard Kurth conducted the analysis of non-response and prepared the first draft of Appendix A. Ronald Estes supervised the bibliographic searches required for Chapters Five, Six, and Seven. Able bibliographic and editorial assistance was received from Russell Thornton and Marie Osmond. David Brenner and Richard Noennich developed computer programs for the various phases of data reduction and analysis. Peggy Phelps administered the many financial matters connected with our research, while Barbara L. Tanner served as the project secretary during the first year of our work and Mary Lou Rippee during the second.

Portions of early drafts of this report were read and criticized by many colleagues. We are particularly indebted to Professors Ronald Corwin and Robert Dreeben for their most extensive and helpful criticism of the entire final draft. Although we have made a concerted effort to strengthen this report in the light of all suggestions we have no doubt fallen short and must remain solely responsible for the limitations of our work.

Tallahassee, Florida — Robert E. Herriott

January, 1969 — Benjamin J. Hodgkins

SUMMARY

Chapter One of this report introduces the general focus of the research -- the issue of "educational opportunity" within American society. Evidence from a variety of sources is presented to document the existence of inequalities in educationally related behavior. We note, however, that although a shift from a "conservative" to a "radical" definition of the concept of "equality" has been taking place during the past century, there is still great variation in its meaning. This variation is to some extent the result of disagreements regarding the causes of differences in educationally related behavior. Again, although a shift from an emphasis on hereditary to environmental factors can be noted, there is by no means a consensus on the relative importance of one factor versus another. Because of different meanings assigned to the concept and to varying emphases attributed to different factors thought to cause inequality, disagreements arise regarding the appropriate remedies which should be carried out to assure greater equality of opportunity. While a measure of evidence is available to evaluate the tenability of assumptions made by those who see the problem and its solution to lie primarily with the individual, there is little systematic theory or evidence upon which the validity of proposals which focus on either the educational system or the larger social order as both the source of the problem and the most appropriate focus for change. It is in part to meet this need that the subsequent theoretical model and data analysis presented in Chapters Two through Twelve is presented. In part, also, the purpose of the model and analysis is to permit a general view of American education in terms of modernization processes apparent within our society.

Modernization and Education

Chapter Two discusses the nature of modernization and its effects upon societies generally and upon American society specifically. The close relationship cross-culturally between modernization and education processes is observed, and it is asserted that the basis for this relationship rests upon the technological requirements of modernizing societies. Specifically, we argue that technological development, as the basis for modernization, necessitates the development of particular skills and orientations on the part of the members of the society. Furthermore, because of the nature of these skills and orientations, they can best be instilled through the institution of formal education. We contend that requirements for personnel with appropriate skills and orientations underlie the close relationship between modernization and characteristics of a system of formal education.

A second major consideration in Chapter Two concerns the uniformity of the modernization process within any society and we note considerable variation in the manner in which modernization can and does occur within any society. Thus, modernization is a continuous transitional process wherein particular institutions or geographic areas are at different stages of modernization and are modernizing at different rates. This differential modernization process, along with the previously noted close relationship between education and technology, has led us to suggest that different states within the United States could be characterized as being more or less modern. Drawing upon indicators used in cross-cultural research and upon U. S. Census data for 1960, an index of "modernization" is constructed, and the 48 coterminous American states are ranked in terms of their degree of modernization. Subsequently, a correlation of the modernization score for those states with particular attributes of their educational system is performed, and yields results consistent with our earlier assertions.

On the basis of these findings, we adduce that in contemporary American society, modernization influences education, at least at the level of the state. We then reason that since modernization affects education at such a macroscopic level, it could also do so at the level of the school as a social organization. Thus, we assert that the same conditions fostering or hindering modernization exist within states as well as among them, and that the concommitant development of formal education at the level of the school will vary in a similar manner. To explore this possibility, a more elaborate framework than that offered in traditional organizational theory is required -- one that can take into account more systematically the nature of possible environmental influences upon the school as a social organization. We have selected the "general systems approach" as set forth by Buckley, Katz and Kahn, and von Bertalanffy.

Open Sociocultural Systems

We introduce the concepts associated with a general systems approach in Chapter Three and relate this approach to sociocultural systems in general. It is pointed out that sociocultural systems are purposive in nature and adaptive to environmental constraints. The purposive nature of the sociocultural system is seen as being determined by its institutional role, while its adaptive tendencies are explained in terms of its dependence as an open system upon its more immediate environments. Inputs to sociocultural systems are defined in terms of materials, personnel, and information, and are distinguished from production throughputs which are seen as the material and/or personnel acted upon by the sociocultural system. Likewise, the distinction is made between organization outputs (the energies expended by the organization in the meeting of its organizational requirements) and production outputs (the transformed throughputs of the system). Homeostasis of the sociocultural system is defined in terms of the system's efforts to maintain itself in the face of conflicting institutional requirements and as environmental constraints and pressures. Differentiation is viewed as being the tendency of the sociocultural system to develop into a more complex form. As a final step in this analogy between general systems and open sociocultural systems, five subsystems are identified as comprising the sociocultural system -- maintenance, production, boundary, adaptation, and managerial. The first four subsystems are each seen to vary in importance with the nature of the environmental constraints and pressures, and the fifth is perceived to be more stable.

In Chapter Four the school is described in terms of these general characteristics of open sociocultural systems. Inputs are defined in terms of the materials, personnel, and information utilized by the school in its on-going activities. Production throughputs are identified as the "raw materials" acted upon by the school (i.e., the pupils). Organizational outputs are defined in terms of the energies expended by teachers, administrators, school board members, and other school personnel in meeting the organizational requirements of the school, and in fulfilling the school's institutional role. Production outputs are defined in terms of the pupils at a terminal level of the organization, since they are acted upon by it and are then released into the social environment.

The Environments of Schools

In Chapters Five, Six and Seven we consider selected aspects of the school's sociocultural environment -- region, metropolitanization, and social class. We review extensive literature concerning differences within American society on these dimensions. By so doing, two important factors are noted: first, that American society is not as homogeneous as is generally assumed; secondly, and perhaps of more importance, we describe the manner in which variations in region, metropolitanization, and social class can influence the nature of the environmental context of the school and thus the school itself.

In Chapter Five, five regions are identified: the Northeast, the Southeast, the Great Lakes, the Plains, and the West. Although having some similarity in ideology and values, these regions are seen to vary in the relative emphasis given to particular beliefs and values which in turn is associated with their extent of modernization.

The ideology and values believed to be most consistent with modern sociocultural requirements are those associated with materialism and progress. It was also argued that the development of an elaborate technology in a society presupposes a willingness to manipulate the physical environment, as well as a belief that it can be done. These, plus the tendency to define "progress" in tangible and mechanistic terms, are essential ingredients in the development of a "modern sociocultural system," for they permit the continued development and exploitation of the technological means potentially available to any group. In the case of the regions, the Northeast, West and Great Lakes were thought to emphasize these characteristics to a greater extent than the Southeast and the Plains. Consistent with this expectation, we noted that the former three regions are much higher in terms of the modernization index than the latter two regions.

Chapter Six contains our discussion of metropolitanization and the effects of this process upon educational phenomena. Consideration is also given to the differences between rural or non-metropolitan life and urban or metropolitan life. These metropolitan-nonmetropolitan differences are considered to be important in determining the ideology and values characteristic of an area. The relation of these to community cohesion is also noted. It is pointed out that in the non-metropolitan community, values and ideology serve to unite the community and, therefore, take on a "sacred" quality. In contrast, the cohesion of metropolitan communities is based upon a "pursuent rationality" or cooperation in order to attain individual ends. In this type of community cohesion is maintained through an orientation based upon universalism, specificity and achievement. This type of cohesion is seen to be more consistent with the requirements of modern society and, accordingly, to produce a more modern sociocultural context within which the school as a social organization exists.

Chapter Seven considers the nature of social class differences in American society. Within this chapter, the definition of social class is considered, and research concerning both general class differences in American society and the effects of such differences upon education are cited. Social class differences are seen to be primarily the result of particular combinations of skills and orientations associated with the productive process. The consequences of such differences for education, we argue, are manifested primarily in different orientations. Relative to the educational system, middle class behavior is predicated upon social role orientations best described as universalistic, specific, affectively neutral, and achievement oriented. In the same context, lower class behavior is seen to be particularistic, diffuse, affective and ascriptive in nature. The former type of role orientation is characterized as being more "modern" (i.e., more consistent with the requirements of a complex, industrialized society), and the latter type characterized as being less so.

Research Design

Chapter Eight synthesizes in brief fashion the conclusions reached in Chapters Five, Six and Seven, regarding the nature of the influence of region, metropolitanization and social class upon education and integrates those conclusions with the model of the school as an open social system set forth in Chapters Three and Four. Drawing upon the discussion of the relationship of the modernization process to formal education in Chapter Two, the three environmental attributes are related to the school in terms of the extent to which they reflect the effects of the modernization process. In this chapter, the broad working hypothesis is advanced that *the more modern the sociocultural context of the American public school, the more modern its organizational structure and functioning*.

In Chapter Nine, the data used in the analysis are introduced. It is noted that these data were collected in 1965 by the U. S. Bureau of the Census as a minor part of the Equality of Educational Opportunity survey of the U. S. Office of Education. The sample of schools available for analysis are described in terms of the three modernization contexts (region, metropolitanism, and social class), and also in terms of their racial compositions. In addition, a preliminary analysis of the type of control and organizational arrangements is made to introduce the analytic methods employed and to demonstrate the feasibility of the more complex analysis to be performed in Chapters Ten, Eleven and Twelve.

Organizational Structure

Chapters Ten, Eleven and Twelve present analyses of the data which deal with particular aspects of the American public school as a social organization. In Chapter Ten, two aspects of organizational structure are considered -- the size of the school and one form of structural specialization (the number of grades within the organization). Based upon our working hypothesis that the more modern the sociocultural context of the American public school, the more modern its structure and function, it is anticipated that the more modern region, metropolitan area, and social class context would, on the average, have larger and more specialized schools. This expectation is supported by the results of the analysis performed. Schools in the Northeast, West and Great Lakes are, on the average, significantly larger than schools in the Plains or Southeast regions. The more metropolitan area, on the average, has the larger schools as well. So, also, do the higher social class schools tend to be larger, on the average, than the lower social class schools. One important exception to our expectations is reflected in the interaction effects of the social class and central city context. Important also is the interaction effects of region and central city upon school size.

Increased specialization of grade level is also found to be related to the modernization context. Further analysis of the data for main and interaction effects of the three modernization contexts reveals a significant relationship existent in each case, independent of the effect of the other two contexts. In particular, the metropolitan context contributes to the increased probability of age-grade specialization within the sample of schools. The interaction effects of regional, metropolitanization and social class environments in all cases involve the social class context. Specifically, the data indicate that the more modern the region and metropolitan area, the less effect social class context has upon organizational age-grade specialization.

Organizational Inputs

Chapter Eleven focuses upon the effects of regional, metropolitanization, and social class contexts upon the personnel and material inputs into the American public school. Those personnel inputs analyzed are the percent of teachers in the school with at least a master's degree and the percent of male teachers in the school. Material inputs include whether or not elementary schools have a centralized library, the presence of typing instruction in junior high schools, and the presence of a shop with power tools in junior high schools.

Results of the analysis reported in Chapter Eleven indicate that the more modern the region and the social class context, the greater the percentage of teachers in the average school with at least a master's degree. However, the effects of metropolitan area on this aspect of school inputs appear to be expressed indirectly through the size of schools. So, also, the more modern region had significantly more male teachers in the average school than the less modern region. However, our analysis revealed that the effects of metropolitan area and social class context on teacher sex distribution are not as predicted. A higher proportion of male teachers, on the average, are found in the lower class schools than in the upper class schools, with the tendency for schools in the central city to have fewer male teachers than comparable schools in the ring or non-metropolitan areas.

The three material inputs are also analyzed to determine the effect of modernization contexts upon organization specialization. The results indicate, as expected, that in the more modern metropolitan area, elementary schools, on the average, are more likely to have a centralized library than are those in the ring, while, in turn, schools in the ring are more likely to have a centralized library than are those in a non-metropolitan area. So, also, higher social class environments have a greater percentage of elementary schools with centralized libraries than lower class environments. However, when the effect of the size of the school is removed, the influence of the metropolitan area is somewhat reduced (although still significant), while the effect of social class is increased. In addition, the less modern region has a significantly higher percentage of elementary schools with a centralized library than does the more modern region.

Junior high schools with an emphasis upon typing are more common in the modern region (Northeast, West, and Great Lakes) than in the less modern region (Southeast and Plains). So, also, schools in the central city emphasize typing more than do schools in the metropolitan ring or non-metropolitan areas. Further, in all social class contexts except the central city in the modern area, schools in higher social class environments give more emphasis to typing than do schools in lower class environments. However, this difference between schools in differing social class environments is not statistically significant, nor are schools in the ring significantly different from schools in the non-metropolitan area in respect to this type of input.

Finally, the input of a shop with power tools is found to vary significantly with all three modernization contexts in the manner predicted. The more modern region, the central city, and the higher social class schools are all observed to have a higher percentage of junior high schools with a shop with power tools than are their counterparts in less modern contexts. Further analyses reveal significant interactions, for social class differences in the percentage of junior high schools having a shop with power tools are much greater in the metropolitan ring and non-metropolitan area of the less modern region (but only in the non-metropolitan area of the more modern region), than in the central city. These relationships persist when the size of the school is controlled.

Production Throughput and Output

In Chapter Twelve the analysis centers on the effects of the three modernization contexts upon production throughputs and outputs in

American public schools. Throughputs are measured by the percent of pupils in the school behind in reading at least one year (technical knowledge), the mean I.Q. of the students in the school (technical skill), and the percent of pupils in the school at least one year behind their age grade cohort (instrumental orientation). Production outputs are measured by the percent of school dropouts (negative termination), the percent of pupils who went on to a four year college (traditional positive termination), and the percent of pupils going on to any form of higher education beyond high school, controlling for the percent of dropouts (composite positive termination). In all cases the effect of organizational size and input specialization (the percent of teachers in the school with at least a master's degree) is also controlled.

Technical knowledge varies between schools as anticipated with respect to region and social class. Specifically, schools in the more modern region and the higher social class context, on the average, have a significantly smaller percentage of students behind in reading than do schools in the less modern region and lower social class context. This is not the case for metropolitan area differences, however. The metropolitan ring is not appreciably different from the non-metropolitan area on this measure of throughput. Further, the metropolitan central city area, on the average, has a greater percentage of reading retardation than do the other two areas. An interaction between social class and the central city results in an apparent increase in the difference between the percentage of pupils behind in reading in the lower and upper class schools within the central city, in comparison to that noted between these same social class contexts in the metropolitan ring or non-metropolitan areas.

The effectiveness of the school in transmitting technical skill, as measured by average I.Q. scores, is found to be similar to the results obtained in the analysis of reading retardation. Again, region and social class effects upon the school are as anticipated, and again metropolitan effects are in the opposite direction from that predicted.

The analysis of the transmission of an instrumental orientation, as operationally defined by the percent of students in the school behind in their age-grade cohort, is found to be similar to the results noted in the case of technical knowledge and skill. As in those cases, the effects of region and social class context upon the school are in the manner anticipated, while the effect of metropolitanization is in the opposite direction. Again, the interaction of the effect of the central city with social class results in greater differences between higher and lower class schools in the central city than in the metropolitan ring or non-metropolitan areas.

In analyzing the effects of the three modernization environments on the production output of the schools, negative termination (in terms of the average number of dropouts) is noted to be as anticipated with respect to region and social class, but in the opposite direction for metropolitan areas. Specifically, it is observed that schools in the more modern region and in contexts of higher social class, on the average, have significantly fewer dropouts than do schools in the less modern region and of lower social class context. The metropolitan ring and non-metropolitan schools, however, have fewer dropouts than do the central cities and do not differ from each other in the average number of dropouts. Again, the effects of the interaction between the central city and social class contexts result in greater differences between the average number of dropouts in the higher and lower class schools than is true for the metropolitan ring or non-metropolitan schools.

The analysis of traditional positive termination, as measured by the percent of high school graduates going directly on to a four-year college, indicates that, as expected, the average percent of pupils going on to a four-year college from higher class schools is significantly greater than that from lower class schools. Again, the interaction of central city and social class contexts results in a greater difference in the central city between higher and lower class schools than in the metropolitan ring or non-metropolitan area schools. Further, interaction of the effects of the ring and social class environments results in average positive termination percentages in lower class schools being greater in the non-metropolitan area schools than in the metropolitan ring, while the average positive termination differences for higher class schools between metropolitan ring and non-metropolitan area is as expected. Thus, in high social class settings public schools in the metropolitan ring are more effective, on the average, than schools in the non-metropolitan area, but this is not true in lower social class settings.

A second reversal from the expected results occurs with respect to regional effects. On the average, public schools in the less modern regions have a significantly greater percentage of their high school graduates going on to a four-year college than do schools in the more modern region. This appears to be particularly true in the non-metropolitan areas. However, the analysis of a composite measure of positive termination, as measured by the percent of high school graduates going on to any type of further education (corrected for dropouts), reveals that the more modern region and social class environments, on the average, send a greater percentage of pupils on to some form of higher education than do their less modern counterparts. The effects of metropolitanization appear to be more complex, however, and both regional and social class interactions with the metropolitan area are significant.

Conclusion and Implications

It can be noted from the overall results reported in Chapters Ten, Eleven and Twelve that the working hypothesis advanced in Chapter Eight (that the more modern the sociocultural context of the American public school, the more modern its organizational structure and functioning) is generally supported. After noting some important limitations of the research with respect to its consideration of the environments of schools, the school as an open social system, sampling errors, measurement errors, and uncontrolled extraneous variation a series of important implications suggested by both theory and data are noted. These are that:

1. Variation in regional values and beliefs appears to influence the school more than has generally been acknowledged.

2. As a consequence of the growing pressures of modernization, schools in some social areas will find themselves increasingly the focus of conflict between the institutional requirements of education in a modern society and the more traditional pressures and constraints of the local school community.

3. Social class context is becoming increasingly important as an environmental influence upon the school and, therefore, we can anticipate the school will become increasingly defined as a means to a societal vocational end rather than as a source of community cohesion and continuity.

4. Less local support for the schools' efforts can be expected for schools in lower social class contexts. Increasingly, efforts to equalize educational opportunity will have to come from the Federal and state levels.

5. Schools in some environmental contexts may inadvertently reinforce negative attitudes regarding the instrumental orientation associated with post high school behavior in the adult life of modern society.

6. Schools in lower social class areas are less effective and, therefore, inequality of educational opportunity exists for the lower social class pupils as a function of the structural and functional characteristics of their schools.

7. The modernization process is accentuating differential opportunities for education between social classes.

8. Schools in the lower class areas of central cities may be modernized to the point that they operate in a dysfunctional fashion, as far as educational opportunity for the lower social class is concerned.

9. If equality of educational opportunity within American cities is to be achieved some resolution must be found for the current conflict between the society's manpower requirements and the psychological needs of many individuals.

Chapter One. The Role of the Public School in the Equalization of Educational Opportunity

The general problem of opportunity within American society can be viewed as a problem in the identification, cultivation, certification, and allocation of human talent. Historically, Americans have ascribed great value to the equalitarian view that society must be kept open so that the "native" talents of all individuals can be developed.[1] However, although taking great note of the accomplishments of a few Americans of "humble birth" who have experienced great upward mobility in the occupational world, American society has until recently expressed little systematic concern regarding the many other individuals who have not been upwardly mobile, and have thus been unable to benefit from the general societal progress which has been taking place. Although in the past this variation in upward mobility has often been attributed to variation in innate human "ability" and "motivation," in current dialogue it is increasingly being attributed to variation in "educational opportunity."[2]

That there is variation in educational opportunity in America has been inferred from a variety of evidence regarding differences in educationally related behavior. Adolescents from white-collar families attend college more frequently than do those from blue-collar families;[3] Negroes are more frequently excluded from military service because of educational deficiencies than are whites;[4] rural children more frequently attend one-room schools than do those in urban areas;[5] per-pupil expenditures are higher in the suburbs than in the slums;[6] students from low-income families more frequently "drop out" of high school than do those from high-income families.[7] However, the degree to which the American public school can be held responsible for such variation is widely debated. To a large extent this debate has arisen due to conflicting assumptions regarding the causes of such observed differences in educationally related behavior.

Causes of Variation in Educationally Related Behavior

There has long been a concern regarding the extent to which variation in such educationally related behavior as literacy, school and college attendance, ability and achievement test scores, etc., is attributable to innate differences between subgroups of individuals within American society. The question has been posed in many ways: nature versus nurture, heredity versus environment, intelligence versus experience. Although each explanatory approach has always had its particular advocates, one alternative dominated both scientific and lay thought from before 1900 through World War II.[8] According to Hunt,

> This traditional set of answers . . . rested on two beliefs which . . . had the status of basic faiths. One of these may be called the assumption of "fixed intelligence." The other . . . the assumption of "predetermined development." Taken together ...

> [they] . . . justified the notion of intelligence as an innate dimension of personal capacity which increases at a fixed rate to a predetermined level . . . These assumptions were also part of the general conception that intellectual capacity and the behaviors taken to indicate it unfold automatically with anatomic maturation, and that anatomic maturation proceeds at a fixed rate so long as the metabolic requirements of the infant and child are met.[9]

The dominance of such assumptions had an inhibiting influence on educational change during the pre-war period, for since individual development was considered to be predetermined there could be little advantage in reforming the schools to attempt to cultivate it.[10] However, the history of behavioral science since World War II is the record of concerted attacks upon these traditional assumptions. Within psychology the early work of Harlow,[11] Riesen,[12] Hebb,[13] and Piaget[14] was instrumental in documenting the adaptive nature of human development, thus weakening the prewar domination of explanations which emphasized the exclusive role of genetic factors. The later work within social psychology of Bernstein,[15] Hess,[16] and Deutsch[17] has been instrumental in establishing a relationship to educational behavior of preschool familial experiences. More recently, the work of Coleman,[18] Wilson,[19] Herriott,[20] Turner,[21] and other sociologists[22] has shown the importance of relationships with school peers upon the educationally related behavior of adolescents.

Largely through such efforts as these there are today few advocates for the exclusive role of heredity in the explanation of variation in educational behavior. Therefore, most contemporary proposals for the reform of American public education contain the assumption that the achievement of greater equality of educational opportunity requires a modification of the environment of the child.[23] However, the specification of which environment of the pupil (family, peer group, neighborhood, community) is to be modified often varies according to one's conception of "equality."

Varying Conceptions of "Equal" Educational Opportunity

Proposals for the reform of American public schools not only contain assumptions regarding the causes of differences in educationally related behavior but also assumptions regarding which of these causes indicates an absence of "equality" of educational opportunity. However, as Lieberman has noted, "Few concepts in the field of education have been the subject of as much confusion as the concept of equality of educational opportunity."[24] Much of this confusion is attributable to conflicting value orientations held by various individuals or groups as to what differences in human and social conditions are morally wrong. In addition, disagreements exist regarding what conditions tend to deny American citizens equal protection of the laws as guaranteed under the 14th Amendment to the Constitution of the United States.

A major aspect of the difficulty in reaching consensus on a definition of "equal" educational opportunity also stems from the fact that the phrase has been given different meanings by different individuals at different points in the history of American education. However, a general shift from a definition that emphasizes the individual's responsibility to avail himself of education to one that emphasizes the society's responsibility to see that he succeeds has been taking place. Trow has identified this shift as one from a "liberal" to a "radical" conception of equality of educational opportunity.[25]

> Under the liberal concept, responsibility for the student's success or failure is placed largely on his own shoulders; although the quality of the school and the teachers is thought to have some bearing on the matter, the primary cause of success or failure in school is seen to be the student's own moral and intellectual resources. Under the radical concept the student's success or, more commonly, failure is seen as the failure of the school or teacher, a failure to create in the child the moral and intellectual resources that lead to academic success.[26]

Although distinctions such as "conservative," "liberal," and "radical" are at best rather arbitrary, it would appear that the conception of equality of educational opportunity referred to by Trow as being "liberal" is better represented by the term "conservative," for the advocates of such a definition emphasize the basic responsibility of the individual for his own well being.

Coleman has identified four alternative conceptions which, although each is present in current dialogue, can be viewed in terms of an historical shift from a conservative to a more radical definition of "equal educational opportunity."

> The first stage in the evolution of the concept of equality of educational opportunity was the notion that all children must be exposed to the same curriculum in the same school. A second stage . . . assumed that different children would have different occupational futures and that equality of opportunity required providing different curricula for each type of student . . . The third stage can be seen at least as far back as 1896 when the Supreme Court upheld the southern states' notion of "separate but equal" facilities. [The dominance of this] stage ended in 1954 when the Supreme Court ruled that legal separation by race inherently constitutes inequality of opportunity.[27]

There is today a fifth interpretation of this concept, one apparent in a shift between 1954 and 1965 from the assumption that schools provide equal educational opportunity if they are equal in their inputs (e.g., plant, teachers, curriculum, supplies), to an assumption that, to provide equal educational opportunity, schools must be equal in their outputs (e.g., pupil knowledge and skill). It was this latter assumption that was made explicit by the U. S. Office of Education in interpreting its

1965 national survey of educational opportunity and by the U. S. Commission on Civil Rights in its examination of racial segregation in schools.[28] However, even among those who adopt the equal output assumption, there is today disagreement regarding the extent to which the society must guarantee equality in output irrespective of possible inequalities in the "initial condition" of pupils.[29]

Contemporary Reform Practices and Proposals

Within contemporary dialogue on the reform of American public education there are instances of each of the competing conceptions of equality of opportunity noted above. In fact many disagreements regarding the role of the school in the equalization of educational opportunity can be traced not only to disagreements regarding the causes of inequalities which were noted earlier, but also to disagreements regarding the most appropriate conception of "equality of opportunity" itself.

Some insight into important distinctions among the many contemporary reform practices and proposals can be gained by considering a sample of reforms in terms of what the reformers view to be 1) the source of the problem and 2) the most appropriate focus for change. This has been done in Figure 1-1 where nine current reform practices or proposals have been classified in terms of these two variables simultaneously with respect to three categories: 1) the individual, 2) the educational system, and 3) the larger social order.

A large number of current reform practices seem to view the source of the problem of inequality in educational opportunity as the inability of many individuals to capitalize on existing opportunities. However, within such definitions of the problem the focus for change seems to vary from an emphasis on the individual himself (e.g., proposals for increased emphasis on educational counseling as a way to help individuals to understand better the relationship of their abilities to existing curricular and vocational opportunities), the educational system (e.g., proposals for giving children from "culturally disadvantaged" homes a "headstart" through special preschools), or the social order (e.g., proposals for the elimination of discrimination in hiring so that individuals can obtain the types of jobs for which they are already qualified).

A second general category of reform practices and proposals seems to reject the assumption that the individual himself is the major source of the problem of inequality of educational opportunity and views it in terms of inadequacies in the educational system. Here too the focus for needed changes seems to vary from the individual (e.g., proposals for an increased emphasis on compensatory education designed to enable pupils from "culturally disadvantaged" homes to catch up with their more advantaged peers), the educational system (e.g., plans for the decentralization of the administrative structure of urban school districts), or the social order (e.g., plans to create a "free-market" whereby vouchers provided to parents could be used by them to purchase directly the type of education they desired for their children).

Source of The Problem	Focus for Change		
	Individual	Educational System	Social Order
Individual	1. Educational Counseling	2. Special Preschools	3. Elimination of Job Discrimination
Educational	4. Compensatory Education	5. Administrative Decentralization	6. Free-Market
Social	7. Improved Social and Political Education	8. Revision of School District Boundaries	9. Population Redistribution

Figure 1-1. Nine selected practices and proposals for the achievement of greater equality of opportunity, by assumed source of the problem and focus for the change.

The third general category of reform practices and proposals seems to view the source of the problem of inequality of opportunity as neither the individual himself nor the educational system, but rather the larger social order in which the educational system is located and controlled. Practices and proposals for reform at this level also vary in their focus from the individual (e.g., plans to increase the pupil's awareness of the social and political realities of our society so that he can better cope with them), the educational system (e.g., plans for rearranging school attendance district boundaries via busing, educational parks, school pairing, consolidation, etc.), or the social order (e.g., proposals for the creation of a more even distribution of social and economic power across school districts via open housing, urban renewal, experimental cities, migration incentives, etc.).

Overview of this Report

Although there is a modicum of social science theory and evidence which permits some evaluation of most of the practices and proposals for educational reform which see the individual as either the source of the problem or the focus of change (Cells 1, 2, 3, 4, & 7 in Figure 1-1), there is currently a great paucity of both systematic theory and evidence required for the evaluation of practices and proposals which focus on either the educational system or the larger social order as both the source of the problem and the most appropriate focus for change (Cells 5, 6, 8 & 9 in Figure 1-1). The recent crisis with respect to the decentralization controversy in New York City gives testimony to the fact that we simply do not have the same degree of understanding of causal relationships at such macroscopic levels as the school, community, and society as we do at the more microscopic level of the individual pupil. Therefore, in the chapters which follow an attempt is made to begin to understand better the relationship of the American public school as a social organization to the sociocultural contexts in which it exists.

There are many aspects of the sociocultural context which can be considered relevant to the nature of the school as a social organization. In this instance, however, we shall be concerned with the influence of modernity upon specific characteristics of the school as a social organization. The process of modernization is, perhaps, one of the most significant events occurring in the contemporary social life of all men. Influencing social institutions of societies,[30] as well as the attitudes, values, and beliefs of society's membership,[31] modernization's full impact upon social behavior is only beginning to be fully appreciated.[32] Its particular relevance to this study on the equality of educational opportunity rests upon the manner in which variation in the degree of modernization found in a particular sociocultural context influences the educational processes within a school. Specifically, it is our thesis that the modernity of a school's social context places particular constraints upon the school as a social organization, with consequences for the educational opportunities of students who attend the school.

There are several approaches to the study of social organizations. While more traditional organizational theory is available and has been applied to some aspects of the school as a social organization,[33] we have chosen to draw heavily from a general systems approach which appears to have heuristic value for both understanding schools as social organizations and for evaluating alternative strategies for the reform of American public education.

Chapters Two through Fourteen which follow are divided into four major sections. Section I presents an analysis of the function of formal education in modern American society and introduces the system theoretic framework which guides our later analysis. After explicating the concept of "modernization," Chapter Two considers the association of modernization with the social institution of formal education and presents some original documentation of this relationship within contemporary America. In Chapter Three the concept of "open system" is introduced and is applied to sociocultural systems in general. The final chapter of Section I focuses on the school as an open sociocultural system, considering its organizational subsystems and characteristics, and examines how they can vary with the school's sociocultural environment.

In Section II some important sociocultural environments within American society are identified and the manner in which they can affect the school is considered. Chapter Five discusses first classical and contemporary views of the concept of "region," and then explores the relationship of region to modernization, as well as noting fundamental differences among American regions, both in terms of their modal ideology and values, and in terms of educational phenomena. In Chapters Six and Seven a similar examination of the concepts of "metropolitanization" and "social class" is performed.

With Sections I and II as a background, Section III reports the results of an empirical study of contemporary American public schools designed to explore the efficacy of the open-systems approach. In Chapter Eight the discussions of Chapters Two through Seven are synthesized and the working hypothesis offered that the more modern the sociocultural context of American public schools, the more modern their organizational structure and functioning. Chapter Nine describes the methodology involved in the collection and analysis of data from a national sample of 7,771 American schools, and characterizes these schools in terms of their regional, metropolitanizational, social class, and racial contexts. Chapter Ten tests and supports the prediction developed from the working hypothesis that the more modern the sociocultural context of American public schools, the more specialized their organizational structure. In Chapters Eleven and Twelve additional predictions are tested and supported with respect to organizational inputs, throughputs, and outputs.

Section IV concludes the report. Chapter Thirteen considers some of the limitations of the theory and data presented in the previous chapters, while in Chapter Fourteen the findings of the report are summarized and important implications are considered for both the sociological study of schools and the equalization of educational opportunity in contemporary America.

Notes and References (1)

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31. See Daniel Lerner, *The Passing of Traditional Society: Modernizing the Middle East* (Glencoe, Ill.: The Free Press, 1958); Alex Inkeles, "Industrial Men: The Relation of Status to Experience, Perception, and Value," *American Journal of Sociology*, 66 (1960), pp. 1-31; David Horton Smith and Alex Inkeles, "The O M Scale: A Comparative Socio-Psychological Measure of Individual Modernity," *Sociometry*, 29 (1966), pp. 353-377.

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Chapter Two. Modernization and Education within American Society

Insight into the function of the school in contemporary American society can be gained by considering the institution of "formal education" within which the school exists. Formal education, as we know it today, is an integral part of modernized societies. Modernization, however, is a relative phenomenon and the role of formal education in the modernization process is generally thought to vary with time and circumstance. In this chapter the concept of modernization is briefly discussed and the relationship of modernization to formal education is considered. Then, using an index of modernization, the assumption is documented that within contemporary American society the degree of educational development is related to the degree of modernization. Some implications of this relationship for the study of the school as a social organization are also considered.

Modernization

The concept "modernization" has generally been equated with social changes in terms of specialization, industrialization, urbanization or economic development.[1] A full understanding of this concept, however, seems to require going beyond the more observable manifestations of the change process to a consideration of the primary basis upon which societies modernize. Such a basis seems to involve: 1) the introduction of a new technology and 2) the social acceptance of the consequences of that technology in both technological and non-technological areas of social life.[2]

The introduction of a new technology is often very rapid and can be identified historically as stemming from either innovation or cross-cultural diffusion. The general acceptance of the consequences of that technology, however, is often quite gradual. Lerner has captured the essence of the non-technological aspects of modernization when he speaks of the challenge to all societies who seek modernization regarding ". . . the infusion of a rationalist and positivist spirit."[3] In effect, given increasing technological knowledge, there must be an increasing willingness on the part of a significant and influential segment of a society's membership to re-structure social life in order to maximize the potential benefits to be derived from that technology. With these "pre-requisites" the developmental change has, as noted by Levy, been toward an *ideal modern state of society wherein the structure and organization of social behavior are maximally adapted to the use of the most advanced technological knowledge for the ultimate material benefits to be derived from its efficient utilization.*[4]

Because pre-modern societies, as well as various social aspects within these societies, vary in terms of their similarity to the modern ideal and in terms of their resiliency to pressures for change, it is reasonable to assume that the degree of modernization also varies both between and within societies.[5]

In effect, modernization may be viewed not only as a continuous process, but as an uneven one since it is dependent upon the variable nature of premodern social and cultural characteristics which facilitate or impede changes in a society.[6]

Formal Education in Modern Societies

The importance of education in modern societies is readily acknowledged in most literature dealing with social change and development. Educational variables are also frequently used in cross-cultural studies as indicators of the degree of development of a society.[7] The effect of modern development upon the role of formal education, however, has for the most part been considered primarily in a speculative manner.[8] Its existence has usually been assumed from the demonstrated fact that as societies become more modern, literacy or the educational level of the population rises. The "why" and "how" of this covariation too often remains unspecified. It is our view that the underlying feature of the relationship between modernization and education is the dependence of technological development upon the social institution of formal education; a dependence important not only in terms of the transmission of technical knowledge[9] but also in terms of the development of an instrumental orientation amenable to the implementation of that knowledge.[10]

Education as a Social Institution

To consider the role of education in modernizing societies it is analytically useful to view education as a major social institution. A "social institution," as we are using the term, may be defined as the socially accepted and standardized manner in which enduring collective problems are resolved by a society.[11] What "enduring collective problem" of modern society does the social institution of formal education seek to resolve? In the most general sense it may be said that the problem is that of socialization, and indeed this answer is frequently advanced by educators and sociologists. Like most simple answers, however, it is correct only in the broadest terms, for the problem of socialization historically has been met and is still met to some degree by the family and by the community. Further, unless a particular kind of socialization occurs in formal educational settings which is not available elsewhere, we would have to assume that family and community agencies could effectively socialize the child without the presence of a formal educational system. Since, however, a rather extensive system of formal schooling does exist in all modern societies, there is reason to argue that formal education, as we know it, performs a distinctive socializing function not performed by other actual or potential socializing agents.

To discover the nature of this distinctive function in modern American society, we must consider the society's dominant values. For, as noted by Parsons, "the main point of reference for analyzing the structure of any social system is its value pattern. . .this value system must by definition be a subvalue system of a higher-order one. . ."[12] The "higher-order" values of modern industrial society generally, and modern American society specifically, have been well expressed elsewhere.[13] They include among other things, an emphasis upon achievement and progress. Without the manifestation of these values in some form, it is doubtful if any society could motivate itself to industrialize.[14] On the "cultural-institutional" level, to use Parsons' term,[15] the values manifested by education should be congruent with those of the society and should be reflected in education's function as a socializing agent, as well as in the structural characteristics of education at the organizational level.

The presence of these values in education, permitting an identification of its institutional function, is seen in the strong vocational preparatory emphasis in American education which anticipates both individual occupational achievement in adult life and societal progress in growth and development.[16] Given the accumulation of specialized knowledge in modern industrialized society, neither family nor community is knowledgeable enough to prepare the young for adult behavior in specific occupational roles. Industrialized society requires a special institution to transmit the knowledge necessary to execute the requirements of vocational roles (be these roles technological, economic, academic, or political), and to develop still more knowledge. In so doing, the values placed by society on achievement and progress are expressed both on the individual and societal levels. The institution in modern industrialized society primarily charged with this responsibility is "education."

Beyond this rather obvious function of education as a transmitter of specialized knowledge is its less obvious function as a transmitter of an "orientation"[17] toward life appropriate in an industrialized society.[18] The nature of this orientation, derived in large part from the social structural peculiarities of modern society, has been well articulated by Weber and by Toennies.[19] Based upon a perception of others as means to an end rather than as ends in themselves, social relationships are predicated upon the individual's "rational pursuit of his self interest." Such an orientation may be described as "instrumental" in nature. This orientation, of course, is relative and not absolute in industrial societies. No pre-industrial society completely lacks such a contractually specific form of social behavior, nor are all segments of modern industrial life so "rational" in their social context as to exclude the influence of ascriptive and emotional factors in determining social behavior. Still, within limits, the representation of an instrumental orientation as characteristic of modern industrial life seems valid.

The need for developing such an orientation establishes what we view to be the second function of education.[20] In modern societies the only systematic attempt to instill in individuals an instrumental orientation occurs in formal education. As with the transmission of special knowledge, it is again the inability of other socializing agencies to transmit an orientation appropriate to life in an industrialized society that has created the need for formal education. Its function, in part then, can be seen as that of inculcating a basically instrumental approach to social relationships. Such an approach is couched in terms of achievement, based upon universal standards of performance, and upon affectively neutral evaluation of others in specific role contexts.[21] An important institutional characteristic of formal education is that it places the neophyte in a social context similar to that in which he will spend his adult life.[22] By "adjusting" to the school milieu over a period of years the student internalizes the instrumental orientation to social relationships necessary for successful performance as an adult in industrial society. While the importance of this internalization process has been generally ignored in educational research, its relevance for adult behavior in modern society has been observed by several students of the contemporary scene.[23]

In sum, it is reasonable to assume that the _institutional function_ of education can be viewed in terms of the social needs of modern industrialized society as they are reflected in the values associated with industrial life. Requirements emerge in the course of industrial development for personnel knowledgeable in the technical requirements of industrialization and holding an instrumental orientation necessary to utilize that knowledge effectively in the structural complexity of modern society. The inability of traditional socializing agencies to meet these particular needs has led, we have argued, to the institutional growth of education as the primary agent for preparing youth to assume instrumental responsibilities in the socio-industrial milieu.[24] It is basically for this reason that modernization and education covary within a society over time.

This relationship seems reasonably evident, given our understanding of the technological basis for modernization, and has been observed elsewhere.[25] However, it is the relative nature of this relationship which has often been neglected--relative, that is, to the extent to which modernization has occurred in a society. Stated somewhat differently, while a formal educational system may exist in all but pre-literate contemporary societies, its function can vary with the extent of modernization in each society.

Support for this thesis is available cross-culturally.[26] Such research suggests that while some formal system of education exists in all literate societies, its role within any particular society is not always attuned to the social changes taking place. As one inspects the pattern of international development, it is evident that the more developed the society, the greater the articulation of the educational system with modern societal needs.[27]

Education as a Bureaucracy. While several bases undoubtedly exist for explaining the dynamics of this relationship, the insights of Max Weber on education as a bureaucracy seem particularly relevant. Weber suggests that there is a close correspondence between the development of a society and the structure of its educational organizations. As societies modernize, the importance of specialized training increases. Accompanying this change in the educational requirements of a society, are changes in the formal education system, for it becomes increasingly rational and bureaucratic in nature. Weber suggests that such "a rational and bureaucratic (modern) structure" of education is best able to accomplish the "ideal" end for imparting specialized training.[28]

Thus, the "advance of rationalism" in modernizing societies brings increasing pressures to bear upon formal education to modify its structure and role to reflect the new needs developing within the society.[29] Formal education becomes increasingly defined as a resource of the society and evaluated in terms of its contribution in meeting modern social requirements. The change to a rational bureaucratic form of education, of course, is not immediate but gradual and reflects the uneven variability of modernization within a particular society. Thus, a society may aspire to modernize, in the sense that it has access to the required technology and desires the material fruits of modernization, long before it is able to re-structure uniformly its formal educational system in a rational bureaucratic fashion.

If we view formal education within a modern society as rational in terms of meeting its institutional role, it is relevant to ask how the educational system's inputs, structural-functional characteristics, and outputs are related to modernization. Generally, following Weber's reasoning, to the extent that inputs and structural-functional characteristics approach the bureaucratic ideal, the educational ideal may be defined as an "efficient" formal system. To the extent that this efficiency results in meeting modern societal requirements, the system can be viewed as "effective" with regard to inputs. For example, both the number and type of students in societies at early stages of modernization are not usually consistent with modern social needs. The formal educational system of such societies tends, in Weber's terms, to emphasize a "pedagogy of cultivation" for the elite and not the specialized training and orientation necessary for modern life. Many ex-colonial African states are examples of this phenomena. In such cases the effectiveness of the formal system is low. In contrast, a system of formal education which selects the number and type of students, and employs a pedagogical means to orient and train them in terms of the requirements of the larger society would be considered a highly effective system within the framework of this discussion.

Such a view of the relationship between the degree of modernization and the "effectiveness" of education has generally been used to compare societies, but it would seem that it can also be applied within a modern society. There is research, for example, which suggests that the process of modernization varies within American society in a manner similar to the variations more frequently noted between societies.[30] If this is indeed the case, it seems reasonable to expect a similar variation among different

American social areas in the efficiency and effectiveness of their formal educational system. However, since we could find no systematic documentation of such a relationship, it may be useful to develop such evidence before continuing our analysis of the school as a social organization.

Variations in Modernization within American Society

In order to document our assumption that within contemporary American society educational development and modernization vary together, a modernization index sensitive to variations among geopolitical areas within America was required. In constructing this index the "state" was chosen as the unit of analysis. In distinguishing the process of modernization among states we considered carefully the primary subprocesses of the concept previously identified as specialization, industrialization, urbanization, and economic development, thereby reducing the likelihood of "fractional coverage."[31]

The first step in the construction of this index of modernization began with a review of the numerous indicators (well over 100) used in cross-cultural research.[32] We kept in mind (a) the appropriateness of each possible indicator as relevant to the four subprocesses, (b) its possible sensitivity to differences within a relatively modern society, and (c) the availability of recent data for the American states. Many indicators which did not meet these criteria were eliminated. Ultimately, five indicators for the 48 coterminous states were chosen as being particularly appropriate (see Table 2-1). It should be noted, however, that these five indicators are obviously only a sample of a larger set of indicators which could be used to characterize the relative degree of modernization of the American states.[33]

A rank ordering of the 48 contiguous states on each of the five selected indicators using 1960 data may be seen in Columns 2-6 of Table 2-2. Because of differences among the subprocesses the covariation of the five indicators across the 48 states was not expected to be perfect, and it is not. However, the overall ranking of the states generally reflects a strong association among the five indicators.

To appraise further the nature of this association for the 48 states, a matrix of rank-order correlation coefficients was computed, and is presented in Table 2-3. The degree of rank-order relationship varies from a low of .32 between the percent of males in non-agricultural work and the number of telephones per housing unit, to a high of .76 for the percent of males in non-agricultural work and percent urban. However, since in this report we are not primarily interested in modernization *per se* but rather in the relation of modernization to educational developments, such variations as can be noted in Table 2-3 are not as important as is their commonality. To summarize this commonality a principal components factor analysis of the five indicators was conducted. Table 2-4 reveals a high degree of internal consistency among the indicators and suggests that the first factor is an excellent summary index

Table 2-1. Five Selected Indicators of Modernization within American Society.

Indicator	Rationale for Selection
1. Per cent of males in the labor force engaged in non-agricultural work.[a]	Directly reflects the degree of industrialization. Indirectly taps urbanization, specialization and economic development. Widely used in cross-cultural studies.
2. Per cent of the population in urbanized areas.[b]	Directly reflects the degree of urbanization. Indirectly taps specialization and economic development. Widely used in cross-cultural studies.
3. Per capita annual income.[c]	Good measure of current degree of economic development. Frequently used in cross-cultural studies.
4. Number of physicians per capita.[d]	Directly reflects the degree of specialization. Frequently used in cross-cultural studies.
5. Number of telephones per housing unit.[e]	Reflects the underlying technological base upon which modernization rests. Widely used in cross-cultural studies.

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[a] U. S. Bureau of the Census. U. S. Census of Population: 1960. General Social and Economic Characteristics, United States Summary. Final Report PC (1)-1C (Washington, D.C.: U. S. Government Printing Office, 1963), Table 129.

[b] U. S. Bureau of the Census, Statistical Abstract of the United States (Washington, D.C.: U. S. Government Printing Office, 1963), Table 12.

[c] Ibid., Table 441.

[d] Ibid., 1962, Table 84.

[e] Ibid., 1963, Tables 1073 & 1074.

Table 2-2. Ranking in 1968 of 48 Coterminous American States on Five Indicators of Modernization and a Modernization Index.

State	Rank in 1960[a]					Modernization Index
	Per Cent Non. Ag.	Per Cent Urban	Per Capita Income	Physicians Per Capita	Tele-phones	
1. Connecticut	4.0	7.0	2.0	4.0	1.0	6.29
2. Massachusetts	2.0	5.0	8.0	2.0	4.0	6.10
3. New York	5.0	4.0	4.0	1.0	19.0	5.51
4. California	11.0	2.5	5.0	3.0	17.5	5.15
5. New Jersey	3.0	1.0	6.0	18.0	11.0	5.04
6. Rhode Island	1.0	2.5	18.0	10.5	20.5	4.24
7. Illinois	14.0	6.0	7.0	16.0	11.0	4.16
8. Pennsylvania	6.0	16.0	15.0	7.0	11.0	4.03
9. Michigan	9.0	13.5	11.0	16.0	6.5	3.96
10. Maryland	8.0	15.0	9.0	10.5	22.0	3.56
11. Ohio	10.0	13.5	10.0	21.0	11.0	3.41
12. Colorado	25.0	12.0	13.0	5.0	15.5	3.22
13. Delaware	15.0	21.0	1.0	20.0	15.5	3.06
14. Washington	18.0	18.0	12.0	14.0	11.0	2.98
15. Utah	19.0	9.0	29.0	19.0	4.0	2.44
16. Oregon	22.0	26.0	16.0	9.0	17.5	1.96
17. Nevada	12.5	17.0	3.0	26.0	34.5	1.92
18. New Hampshire	7.0	29.0	22.0	13.0	25.5	1.54
19. Missouri	30.5	19.0	17.0	8.0	25.5	1.48
20. Florida	16.0	11.0	28.0	16.0	37.5	0.93
21. Minnesota	40.5	27.0	23.0	12.0	4.0	0.93
22. Wisconsin	32.0	22.0	20.0	30.0	6.5	0.65
23. Indiana	20.5	25.0	19.0	35.0	20.5	0.11
24. Arizona	24.0	10.0	25.0	26.0	40.0	-0.03
25. Texas	27.0	8.0	30.0	31.5	33.0	-0.37

Table 2-2. Continued

State	Rank in 1960[a]					Modernization Index
	Per Cent Non. Ag.	Per Cent Urban	Per Capita Income	Physicians Per Capita	Tele-phones	
26. Kansas	38.0	28.0	24.0	28.5	11.0	-0.48
27. Iowa	45.0	35.0	26.0	23.0	2.0	-0.61
28. Nebraska	46.0	34.0	21.0	26.0	11.0	-0.95
29. Maine	17.0	37.0	32.0	22.0	32.0	-1.10
30. Oklahoma	29.0	24.0	35.0	24.0	31.0	-1.23
31. Vermont	35.0	45.0	31.0	6.0	28.5	-1.36
32. Wyoming	37.0	30.0	14.0	41.5	25.5	-1.49
33. Louisiana	20.5	23.0	41.0	28.5	34.5	-1.55
34. Virginia	26.0	31.0	33.5	34.0	36.0	-2.30
35. New Mexico	23.0	20.0	36.0	41.5	41.0	-2.35
36. Montana	42.0	38.0	27.0	33.0	23.0	-2.46
37. West Virginia	12.5	46.0	39.0	36.0	39.0	-3.12
38. Georgia	28.0	32.0	40.0	37.5	42.0	-3.44
39. Tennessee	33.5	36.0	43.0	31.5	37.5	-3.58
40. Idaho	43.0	39.0	37.0	39.5	30.0	-4.02
41. South Dakota	47.0	44.0	33.5	45.5	28.5	-4.63
42. Alabama	30.5	33.0	45.0	48.0	44.0	-4.75
43. North Carolina	36.0	43.0	42.0	37.5	45.0	-4.88
44. North Dakota	48.0	48.0	38.0	44.0	25.5	-4.97
45. Kentucky	40.5	40.0	44.0	43.0	43.0	-5.32
46. Arkansas	39.0	41.0	47.0	39.5	47.0	-5.49
47. South Carolina	33.5	42.0	46.0	45.5	46.0	-5.50
48. Mississippi	44.0	47.0	48.0	47.0	48.0	-6.74

[a] See Table 2-1 for sources.

Table 2-3. Rank-order Correlations, Means, and Standard Deviations of Five Indicators of the Degree of Modernization in 1960 of 48 Coterminous American States.

Indicator of Modernization[a]	1	2	3	4	5	Mean	S.D.
1. Per cent of males in non-agricultural work, 1960.	-	.76	.63	.64	.32	24.5	14.0
2. Per cent urban, 1960.		-	.74	.68	.52	24.5	14.0
3. Per capita income, 1960.			-	.74	.74	24.5	14.0
4. Number of physicians per 100,000 of population, 1960.				-	.65	24.5	14.0
5. Number of telephones per housing unit, 1960.					-	24.5	14.0

[a] See Table 2-1 for sources.

Table 2-4. Factor Weights Resulting from a Principal Components Analysis of Five Indicators of the Degree of Modernization in 1960 of 48 Coterminous American States.

Indicator of Modernization[a]	Factor				
	I (Modernization Index)	II	III	IV	V
1. Per cent of males in a non-agricultural work, 1960.	.79	.54	.04	.22	.18
2. Per cent of population in urbanized areas, 1960.	.88	.26	-.25	-.31	-.00
3. Per capita income, 1960.	.92	-.15	-.15	.20	-.28
4. Number of physicians per 100,000 of population, 1960.	.88	-.06	.45	-.12	-.07
5. Number of telephones per housing unit, 1960.	.76	-.61	-.08	.03	.23
Latent Root	3.59	0.74	0.29	0.20	0.17
Cumulative per cent of trace	71.7	86.8	92.7	96.7	100.0

[a] See Table 2-1 for sources.

of modernization as we have discussed it above. Therefore, the weights for the first factor were applied to the standardized ranks for each indicator and summed in order to arrive at a modernization score for each state. In Table 2-2 the states have been ranked according to their position on this composite modernization index.

The Relationship of Modernization to Education in America

After developing a measure of modernization sufficiently sensitive to differentiate the 48 coterminous states on a modernization continuum, we were ready to document our assumption of a relationship between the degree of modernization and educational development within American society. Five characteristics of education were considered adequate for such a preliminary endeavor: (1) the proportion of elementary school teachers in the state with a master's degree, (2) the proportion of secondary school teachers in the state with a master's degree, (3) the annual per pupil expenditure by the state for elementary and secondary education, (4) the proportion of institutions of higher education in the state awarding a master's or doctoral degree, and (5) the proportion of institutions of higher education in the state emphasizing specialized technical or professional training. The first three characteristics may be considered input variables in that they reflect the investment the state is making in elementary and secondary education. The last two characteristics may be seen as structural variables for they reflect the degree to which specialized forms of higher education have developed in the state.

The zero-order correlation between each of the education variables and the modernization index, along with their multiple correlation, are given in Table 2-5. In all cases the hypothesis of a positive association between modernization and education is supported. Each of the five educational characteristics is significantly related to the modernization index. Further, the resulting fourth-order multiple correlation coefficient of .83 is much larger than the largest zero-order correlation, suggesting an independent importance for each of the five educational characteristics, as well as a strong relationship between the composite of these variables and the modernization index.

Some Implications

It seems evident from the preceding analysis that American states vary in their degree of modernization as we have defined it. Further, and most important from our perspective, the relationship between modernization and relevant attributes of education is in the manner anticipated by our earlier discussion. This systematic relationship is important in several respects. It suggests, for example, that social (as opposed to purely economic) forces beyond the immediate environment of the school can have a pervasive influence upon certain aspects of education. Modernization, as we have described it, is fundamentally a combination of technology and the orientation necessary to successfully employ it--an orientation which in turn rests upon ideology and values. Economic forces, while obviously important, constitute only one substantive expression of that orientation.

Table 2-5. Zero-order and Fourth-order Multiple Correlation of Five Measures of State Educational Development with 1960 Modernization Index (N=48).

Measure of State Educational Development	Coefficient of Correlation
1. Per cent of elementary teachers with a master's degree, 1959-60.[a]	.43*
2. Per cent of secondary teachers with a master's degree, 1959-60.[b]	.55*
3. Per pupil expenditure for education, 1960.[c]	.60*
4. Per cent of institutions of higher education awarding a master's or doctorate, 1960-61.[d]	.39*
5. Per cent of institutions of higher education offering specialized technical or professional training, 1960-61.[e]	.59*
Fourth-order Multiple R	.83*

*p < .05

Sources:

[a] "Teachers with Master's Degrees," NEA Research Bulletin, 40, (1962), pp. 111-115, Table 1.

[b] Ibid.

[c] U. S. Bureau of the Census, Statistical Abstract of the United States: 1963. (Washington, D.C.: U. S. Government Printing Office, 1963), Tables 19 & 144.

[d] U. S. Office of Education, Education Directory: 1960-61, Part 3, Higher Education (Washington, D. C.: U. S. Government Printing Office, 1961).

[e] Ibid., p. 11.

Beyond this suggestion of a macro-sociological influence upon the educational system, the above results suggest that "modernization" is an attribute of the environment of sufficient magnitude to be a force at the level of the school as a social organization, as well as at the level of education as a social institution. Further, these results suggest a basis upon which sociocultural environments *within* American society can be differentiated in a manner not traditionally considered by social scientists interested in education. If it is possible to identify particular types of sociocultural settings as being more or less modern and if the degree of modernization is related to educational structure functioning at the institutional level, then one can expect that educational organizations (i.e., schools) within those environments would tend to vary in their organizational inputs, structural characteristics, and outputs in a similar manner. Confirmation of such variation at the level of the school as a social organization could provide considerable insight into not only the effects of the environment upon educational opportunity, but into the way in which the school and the environment are currently related.

In the following chapters, using a general systems approach, we set forth an explanatory model of the school as a social organization open to environmental influences. Beyond this, we consider types of sociocultural environments that previous research suggests differ significantly on several important dimensions. In doing so, we seek to establish the framework within which the influences of modernization upon the school in various sociocultural environments can be investigated and interpreted.

Notes and References (2)

1. These terms are frequently used interchangeably with the term modernization and usually reflect the author's predilection for one of the four emphases as being most important in distinguishing amounts or types of social change. For interesting variations which reflect this divergent emphasis, see Marion J. Levy, Jr., *Modernization and the Structure of Societies*, Volume I (Princeton, N. J.: Princeton University Press, 1966); Reinhard Bendix, "Industrialization, Ideologies, and Social Structure," *American Sociological Review*, 24 (1959), pp. 613-623; George A. Theodorson, "Acceptance of Industrialization and its Attendant Consequences for the Social Patterns of Non-Western Societies," *American Sociological Review*, 18 (1953), pp. 477-484; Neil J. Smelser, "Toward a Theory of Modernization," in *Social Change*, edited by Amitai and Eve Etzioni (New York: Basic Books, Inc., 1964), pp. 258-274; Wilbert E. Moore, "Industrialization and Social Change," in *Industrialization and Society*, edited by Bert F. Hoselitz and Wilbert E. Moore (New York: UNESCO, 1963), pp. 299-372; Philip M. Hauser and Leo F. Schnore, editors, *The Study of Urbanization* (New York: John Wiley and Sons, Inc., 1965); Manning Nash, "Social Prerequisites to Economic Growth in Latin America and Southeast Asia," *Economic Development and Cultural Change*, 12 (1964), pp. 225-242; or Philip M. Hauser, "The Social, Economic, and Technological Problems of Rapid Urbanization," in Hoselitz and Moore, *op. cit.*, pp. 199-217.

2. This is not to suggest that other factors, such as nationalism, may not have contributed to modernization, but rather to note that without technology and the acceptance of its consequences, modernization as we know it today simply could not have occurred. Technology and its acceptance, then, are viewed here as necessary (but probably not sufficient) conditions for modernization, and therefore can be considered as the primary basis for its occurrence. See Levy, *op. cit.*, and Daniel Lerner, *The Passing of Traditional Society: Modernizing the Middle East* (Glencoe, Ill.: The Free Press, 1958).

3. *Ibid.*, p. 45.

4. Levy, *op. cit.* In large measure, the view of modernity as an ideal and, accordingly, the process of modernization as a continuum is discussed by several authors. Levy and Nash relate it most closely to technology, however. For an economist's view of the relativity of modernization and its meaning for measurement see Norton Ginsburg, *Atlas of Economic Development* (Chicago: University of Chicago Press, Department of Geography Research, Paper No. 68, 1961), pp 1-5.

5. The idea that variation in modernization occurs cross-culturally is readily accepted--even variation among the more developed countries. Variation of modernization *within* one society, however, is a much less commonly accepted idea. Yet, its tenability has been argued by several authorities in the area. See Bert Hoselitz, "Main Concepts in the Analysis of the Social Implication of Technical Change," in Hoselitz and Moore, *op. cit.*, pp. 11-31; Lerner, *op. cit.*; Levy, *op. cit.*

6. Exemplary of the continuous and uneven process of modernization in contemporary American society is the differential development of some aspects of urban life leading to "problems" for city administrators. Thus, archaic political and administrative procedures create a great impediment to the resolution of welfare problems brought about by the rapid urbanization of the American population. See, for example, Philip M. Hauser, "Urbanization: An Overview," in Hauser and Schnore, *op. cit.*, pp. 26-31.

Ideological "lags" seem to be evident, on the national level, in federal legislative activity in this area as well. It is more than coincidental, we would suggest, that what is traditionally referred to as the "Southern-Republican coalition" in the United States Congress is by and large made up of legislators from the least developed states.

7. See, for example, Lyle W. Shannon, "Socio-Economic Development and Political Status," *Social Problems*, 7 (1959), pp. 157-169; R. B. Cattell, H. Breul and H. Parker Hartman, "An Attempt at More Refined Definition of Syntality in Modern Nations," *American Sociological Review*, 17 (1952), pp. 408-421; Leo F. Schnore, "The Statistical Measurement of Urbanization and Economic Development," *Land Economics*, 37 (1961), pp. 229-245.

8. See, for example, Levy, *op. cit.*, pp. 624-634.

9. For a most interesting discussion of this relationship, see Nathan Keyfitz, "The Impact of Technological Change on Demographic Patterns," in Hoselitz and Moore, *op. cit.*, pp. 218-236; and Asher Trapp, "The Social Function of Education Systems," *Social and Economic Studies*, 14 (1965), pp. 1-7.

10. H. Gerth and C. Wright Mills, translators and editors, *From Max Weber: Essays in Sociology* (New York: Oxford University Press, 1946), pp. 426-434.

11. Don Martindale, *Social Life and Cultural Change* (Princeton, N. J.: D. Van Nostrand Co., Inc., 1962), pp. 39-40.

12. Talcott Parsons, "Suggestions for a Sociological Approach to the Theory of Organizations," in *Complex Organizations: A Sociological Reader*, edited by Amitai Etzioni (New York: Holt, Rinehard and Winston, Inc., 1961), p. 36.

13. Among many works in this area, see Reinhard Bendix, *op. cit.*, pp. 613-623; Seymour Martin Lipset, *The First New Nation: The United States in Historical and Comparative Perspective* (New York: Basic Books, Inc., 1963), esp. pp. 1-11 and Chapter 3; Robin M. Williams, Jr., *American Society: A Sociological Interpretation*, 2nd edition (New York: Alfred A. Knopf, 1963), esp. Chapter 11.

14. The indirect manner in which a society may adopt these values, contributing thereby to economic and industrial growth, has been well illustrated in Weber's classic study on the growth of capitalism in western Europe. See Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, translated by Talcott Parsons (London: George Allen and Unwin, Ltd., 1930).

15. Parsons, *op. cit.*, p. 36.

16. For example, see A. H. Halsey, Jean Floud and C. Arnold Anderson, editors, *Education, Economy, and Society: A Reader in the Sociology of Education* (New York: The Free Press of Glencoe, 1961); Campbell Steward, "The Place of Higher Education in a Changing Society," in *The American College: A Psychological and Social Interpretation of the Higher Learning*, edited by Nevitt Sanford (New York: John Wiley & Sons, 1962), pp. 894-939; and S. N. Eisenstadt, *From Generation to Generation*, paperback edition (New York: The Free Press of Glencoe, 1964), pp. 163-166.

17. The concept "orientation" used in this discussion was advanced by Merton and is ". . . the theme underlying the complex of social roles performed by an individual. It is the (tacit or explicity) theme which finds expression in each of the complex of social roles in which the individual is implicated." See Robert K. Merton, *Social Theory and Social Structure*, revised edition (Chicago: The Free Press, 1957), fn. p. 392.

18. Dreeben makes a similar point in suggesting that an important part of school learning is the internalization of behavioral norms necessary for adult life. Such learning, according to Dreeben, is attributable to the social-structural character of the educational organization. See Robert Dreeben, On What Is Learned in School (Reading, Mass.: Addison-Wesley Publishing Co., 1968), Chapter 5.

19. Max Weber, The Theory of Social and Economic Organization, translated by A. M. Henderson and Talcott Parsons (New York: Oxford University Press, 1947); Ferdinand Toennies, Community and Society, Gemeinschaft and Gesellschaft, translated by Charles P. Loomis (East Lansing, Mich.: Michigan State University Press, 1957).

20. Strictly speaking the transmission of specific knowledge is seen as a manifest function (i.e., as intended and recognized consequence of the social institution), while the inculcation of an orientation would be a latent function (i.e., unintended and unrecognized). Such a distinction is not crucial in our model, however, for we are not concerned with the participant's subjective evaluation, but rather with the contribution made by the institution to the larger society. For a discussion of manifest and latent functions, see Robert K. Merton, op. cit., pp. 1-84.

21. Our description of this "instrumental orientation" is, of course, drawn from the pattern variables as developed by Parsons. See Talcott Parsons, The Social System (New York: The Free Press of Glencoe, Inc., 1951), esp. pp. 58-67. Along this same line, McClelland speaks of the importance of the "achievement motive" to industrialization. See David C. McClelland, The Achieving Society (Princeton, N. J.: Van Nostrand, 1961), esp. pp. 36-106.

22. Dreeben, op. cit., Chapters 2 and 3. Also, Levy talks of the school as being the first situation in which the child is treated in a "universalistic" manner. See Levy, op. cit., p. 627.

23. See, for example, David Riesman, The Lonely Crowd: A Study of the Changing American Character (New Haven: Yale University Press, 1950); William H. Whyte, The Organization Man (New York: Simon and Schuster, Inc., 1956); and Daniel R. Miller and Guy E. Swanson, The Changing American Parent: A Study in the Detroit Area (New York: John Wiley and Sons, 1958).

24. To a larger degree, the inability of the family to meet these needs seems to lie in its structure and nature. Thus, families are effective socializing agencies in societies in which "primary group" relationships are emphasized, but not in societies in which "secondary group" relationships are emphasized. For a description of the declining function of the family in our society see William F. Ogburn, "The Changing Family," The Family, 19 (1938), pp. 139-43. For the role of technology in bringing about these changes see William F. Ogburn and Meyer F. Nimkoff, Technology and the Changing Family (Boston: Houghton Mifflin, 1953).

25. Peter F. Drucker, "The Educational Revolution," in Halsey, Floud, and Anderson, *op. cit.*, pp. 15-21; C. Arnold Anderson, "Economic Development and Post-Primary Education" in *Post-Primary Education and Political and Economic Development*, edited by Don C. Piper and Taylor Cole (Durham, N. C.: Duke University Press, 1964), pp. 3-26.

26. M. Brewster Smith, "Foreign vs. Indigenous Education," in Piper and Cole, *op. cit.*, pp. 48-74; Frederick Harbison, "Education for Development," *Scientific American,* 209 (1963), pp. 140-147; Anderson, *op. cit.*, pp. 3-4.

27. For an excellent discussion of this point, see John Vaizey and Michael Debeauvais, "Economic Aspects of Educational Development," in Halsey, Floud, and Anderson, *op. cit.*, pp. 37-49.

28. Max Weber, *op. cit.*, p. 426.

29. *Ibid.*, p. 244.

30. Francis R. Allen and W. Kenneth Bentz, "Toward the Measurement of Sociocultural Change," *Social Forces*, 43 (1965), pp. 522-532; C. Arnold Anderson and Mary Jane Bowman, "Educational Distributions and Attainment Norms in the United States," *Proceedings: World Population Conference, 1954* (New York: United Nations Publications, 1955), pp. 931-942; John Gillin, "National and Regional Cultural Values in the United States," *Social Forces*, 34 (1955), pp. 107-113.

31. Amitai Etzioni and Edward W. Lehman, "Some Dangers in 'Valid' Social Measurements," *The Annals of the American Academy of Political and Social Science*, 373 (1967), pp. 1-15.

32. Most of the indicators originally selected were drawn from the work of Ginsburg, *op. cit.*

33. There is, however, one particularly appropriate indicator of modernization which we could not include in our index of modernization for states--the *consumption* of electrical energy. Although this indicator is central to the concept of modernization as we have discussed it, and has been widely used in cross-cultural studies, reliable data are not available for geo-political units within the United States. Data on the *production* of electrical energy are available but we chose not to use this as a proxy variable because of the lack of correspondence between the geographical location of the production of electrical energy and of its consumption.

Chapter Three. An Open-Systems Approach to Social Organization

In Chapter Two a view of the role of education as a social organization in modern society was set forth. In the present chapter we introduce the general systems approach to be employed in Chapter Four in viewing the school as a social organization. We will first briefly discuss the nature and characteristics of open systems generally and how they interact with their environment. Then we will turn our focus to open *sociocultural* systems with special attention directed to institutions and formal organizations as open systems.

Our discussion draws primarily upon the works of Parsons, Katz and Kahn, Buckley, and von Bertalanffy.[1] However, this reliance is selective in nature, with the expressed purpose of developing a limited explanatory framework within which we can begin to study the American public school. Accordingly, our approach should not be construed as a "theory" but rather as a "heuristic model" derived from several theoretical and conceptual approaches, each offering some insight into the problem being considered.

Basic Concepts

The two most basic concepts in a general systems approach are "system" and "environment." As typically used in scientific literature, the concept of "system" is defined in a highly general manner. To von Bertalanffy, a system is simply ". . . complexes of elements standing in interaction."[2] Hall and Fagen present a more complete definition. To them a system is ". . . a set of objects together with relationships between the objects and between their attributes."[3] Objects, according to Hall and Fagen, are components of the system, while attributes are properties of those objects.[4] In general it is the relationship between objects and/or their attributes which forms a system. Thus, Hall and Fagen emphasize "relationships" in their definition, and consequently are not limited by any structural unit. We agree and define a system as *a set of causally related complex relationships evidencing a high degree of stability over time*.

Every system, of course, exists within an environment. Hall and Fagen define an environment as ". . . a set of all objects a change of whose attributes affect the system and also those objects whose attributes are changed by the behavior of the system."[5] The emphasis in this definition is upon those objects influencing or being influenced by the system as constituting the environment. Von Foerster goes a step further, however, in seeing the environment as ". . . an accumulation of successful solutions (for the system) to the problem of selecting such conditions in the physical world which are at least survivable."[6] This latter view of the environment implies, according to von Foerster, that a particular system has a particular environment and vice versa. Both definitions have utility, dependent upon the purposes of the analyst. In this instance, given our previous definition of a system, we shall define the environment as *those objects or relationships which exist outside of the system but significantly influence or are influenced by it*. Implicit in this definition is a recognition that any system is particular to its environment and must come to terms with it. Also implicit is the view that the boundary between a system and its environment is not clear cut.

A third basic concept, and one which links a system to its environment, is that of "energy." Energy is that which is exchanged between a system and its environment. Closed systems are those systems which, once having been established, have no exchange of energy with their environments.[7] Accordingly, for all practical purposes the closed system can be seen as an entity unto itself. "Classical" thermodynamics in the natural sciences has dealt with such systems as have laboratory experiments in physical chemistry where various chemicals are combined in isolation from their environment in order to bring about particular effects.[8] In contrast, an open system continually exchanges energy with its environment. Biological organisms, such as animals, insects, or men, are the traditional examples of open systems. It is the latter type of system with which we shall be concerned.

With an open system, a problem arises as to the manner and type of exchanges the system has with its environment. It is possible to suggest, for example, that everything exterior to the system either directly or indirectly exchanges some form of energy with it. On the other hand, as suggested by von Foerster's definition of an environment, there is an element of selectivity involved in the exchange process. Not all objects or relationships in a potential environment are equally important for the system. Those significant elements which ultimately constitute a system's environment and exchange energy with the system are determined, as von Foerster suggests, by the criterion of survival. On the organismic level, climate, food, natural enemies, etc., all constitute the environment of the organism. They, in effect, are significant constraints upon the organism's behavior. So, also, on a more general level, such constraints determine the environment of any open system and the type of exchange which ensues.

The concept of "purpose" must also be considered. At the level of biological organisms, purpose is seen to be simply another way of discussing "survival." The specific organism exchanges energy with its environment for the purpose of survival. However, it is important to note that the usage of this term does not pre-suppose an "awareness" on the part of the organism. Also, when one goes beyond the individual biological system, the concept of purpose becomes much more difficult to explain and is frequently used in a teleological manner. As we shall use the term in the following discussion, the concept "purpose" refers only to a directional state of the system consistent with its dominant environmental constraint (e.g., the primary focus of system activities).

General Characteristics of Open Systems

Given the general definitions of a system and its environment, and our distinction between open and closed systems, some of the more generally accepted characteristics of open systems can be noted. In so doing, we will not attempt to deal with these characteristics in detail, but only to provide a framework within which sociocultural systems can be viewed.

Input. At the most abstract level, the open system receives energy from its environment which is relatively free to be used by the system. This imported energy is referred to as input.

Output. Output is the energy expended by the open system. It is all energy utilized by the system in order to sustain itself in the environment.

Negative Entropy. A closed system, according to the second principle of thermodynamics, experiences ultimate entropy (e.g., the final dissipation of energy within the system). An open system, through exchange with its environment, permits new energy to enter the system. This characteristic of an open system is critical for it permits the system to reverse the entropic process characteristic of closed systems, to sustain itself beyond the use of energies present in the system at any given time, and to develop a surplus of energy to be stored or used in the evolution of more complex forms.[9]

Feedback. At the most abstract level, all purposeful systems are characterized by energy inputs whose source is a) the energy output of the system, or b) energy from the system's environment. In the former case, some fraction of the output energy is fed back into the system to act as an impetus to further output--a form of reinforcement. In the latter case, in addition to the input of environmental energy needed to sustain the system, there occurs the input of energy regarding deviation of the system from its purpose. Feedback to the system (either from the system's output or environment) concerning the achievement of the system's purpose is called positive feedback. Input from the environment concerning deviations of the system from its purpose is negative feedback. While both types of feedback are important, negative feedback is usually considered more critical since it permits the system to modify itself to be more consistent with its purpose and with other constraints placed on it by its environment.[10]

Homeostasis. A condition whereby environmental inputs and internal system dynamics are regulated by the open system to insure a steady state is called homeostasis.[11] Following the principle of equifinality, a regulated steady state can be achieved by an open system from different initial conditions and in different ways. This, in principle, is quite different from the closed system wherein a steady state is determined solely by initial conditions.[12]

Differentiation. Another important characteristic of open systems is their tendency to evolve into more complex forms. Associated with the property of negative entropy, this characteristic is attributed to the system's ability to receive inputs in the form of free energy which leads to the negative entropy balance.[13]

Each of the six characteristics discussed above is important in describing generally an open system, and our discussion of open sociocultural systems to follow will be made within this general framework. In this discussion we will illustrate some of the ways in which these general characteristics relate to sociocultural systems.

Open Sociocultural Systems

Our previous definition of a system was general and not necessarily dependent upon the type of systems under consideration, either in terms of its structure or the presence or absence of relationships with an environment. A definition of open sociocultural systems, however, must rely upon environmental considerations, although here again it is not necessary to be limited by structural units.

Considering sociocultural systems, Parsons defines a social system as ". . . a mode of organization of action elements relative to the persistence or ordered processes of change of the interactive patterns of a plurality of individual actors."[14] While Parsons views the "act" as the elementary unit of the system, he feels the "participation" of the actor in patterned relationships is more useful as a basic unit of analysis. This participation has two principal aspects--the position of the actor relative to others in the system (i.e., his status) and what the actor does (i.e., his role).[15] A similar approach is taken by Katz and Kahn who define an "organization" as a system which ". . . consists of the patterned activities of a number of individuals."[16]

The definitions of a sociocultural system by Parsons and by Katz and Kahn have utility when considering individual participation in the system. Their definitions become problematic, however, when one desires to consider the intrinsic qualities of the system distinguishable from the acts of its membership. For while it is true that without the individual there is no social system, it is useful to view a social system as possessing particular attributes, structure, function and purpose independent of its membership. Accordingly, a different perspective on the nature of the system from that which builds upon the activities of the system's members is required. This can be accomplished (as was the case with our general definition of a system) by relating components of the system not to individuals, but rather to the relationships among the system's units.

However, as noted earlier, when dealing with open systems the purpose of the system must enter into its specification. For sociocultural systems such as organizations, purpose can be viewed as the primary environmental constraint, imposed by the larger society, which determines the directional state of the system. This constraint may be identified as the sociocultural system's institutional role. Thus, for example, if we acknowledge the societal role of the economic institution to be primarily that of distributing goods and services, the "purpose" of the business organization would be defined accordingly. This, of course, says nothing about individual motives for profit or an ultimate end state for the business organization. The purpose of which we speak, rather, is a societal constraint characteristic of sociocultural systems at the organizational level. Adding this characteristic of purpose to our previously stated definition focusing upon relationships, an open sociocultural system may be defined as: _a set of causally related complex relationships evidencing a high degree of stability over time in order to effect societally determined ends._

Confounding this view of the purpose of organizations as open systems is their contrived nature.[17] They are not "natural systems" as are biological organisms. Accordingly, the subjective "meaning" of sociocultural systems depends entirely upon human perception determined by ideology and values dominant in the collectivity. This subjective meaning is associated with the motivation to participate, a problem to which Max Weber devoted a great deal of attention.[18] The crux of the problem was, as Weber saw it, the legitimation of subjective motivation and of organizational authority. Formal organizations in modern societies, following Weber, are legitimated by an appeal to rationality; which is to say that "reason" underlies participation, and organizational authority is based upon enacted rules and regulations.[19] This subjective rationality is important, as suggested earlier, in understanding the nature of some environmental constraints upon the organization. However, it is possible to postulate the presence of a second type of rationality; an "objective" (or organizational) rationality, which is a rationality in terms of the system's response to its institutional role and other environmental constraints.[20] "Objective" rationality, in other words, is seen to be that meaning associated with the system's efforts to survive, enhance itself, and fulfill its institutional role.

The importance of this distinction between subjective and objective rationality is critical for the analysis of sociocultural systems in that it distinguishes the social legitimacy of the system as interpreted by its membership and others in the society from the rationality of the system itself. By assuming the environment to be more or less constant in its effects upon the organization, traditional organization theory has tended to ignore the fact that two forms of rationality are involved. More realistically, organizational rationality may be seen as an attribute of the system which finds expression in the ideology and values dominant in the environment. In other words, while the organization is objectively rational in terms of its environmental constraints, its social legitimacy rests upon the subjective rationality of the more immediate environment of which it is a part.

Within the context of our previous discussion of the modernization process (Chapter Two) we can see that as the local environment becomes more modern, local environmental constraints become redefined in terms of ideology and values consistent with institutional roles in modern society, thereby allowing organizational rationality to play a more prominent role in the more modern sectors of society. In effect, the congruence between the requirements of the larger society and the subjective rationality which serves as a basis for organizational legitimation in more local environments reduces the system's use of energy to resolve inconsistent environmental expectations.

Having defined sociocultural systems in terms of general systems theory, we can now illustrate how the six general characteristics of open systems are applicable at the level of both social institutions and organizations.

Input. When considering sociocultural systems, the input is generally perceived to be one of information, materials, personnel, and services performed. At the societal level, such inputs are usually couched in terms of the society's relationship to other societies which form part of the larger societal environment, or in terms of a society's relationship to its physical environment. More frequently, however, sociocultural systems are discussed at the level of the institution or organization. At this sub-societal level, "subsystems" of the larger societal system can be viewed as sociocultural systems existing within an environment which is, in large measure, sociocultural as well. Man's sociocultural systems are both created and constrained by the meaning man associates with them ("symbolism" in von Bertalanffy's terms). They are, as previously mentioned, "contrived systems."[21] Consequently, their "openness" to their environment is never seen as total, but rather selective--dependent upon the relative nature of the organization-environmental relationship. Thus, for example, the meaning associated with a hospital as a system is normally such as to insure its relative openness to inputs from medical associations or community economic groups and its "closedness" to inputs from other (e.g., political) aspects of its sociocultural environment.

The principles associated with inputs of physical systems are analogous in some respects to inputs of sociocultural systems. This is particularly so at the societal level where, as Buckley observes, society may be viewed as a "complex, adaptive system."[22] As with any open system, the society seeks to sustain itself in the larger environment through the use of material, information, and manpower. Sub-societal sociocultural systems are more analytically complex, however. Major social institutions are functional relative to the requirements of the larger society. Organizations, in turn, operate within these institutional frameworks which provide their purpose. Thus, as noted, business organizations operate within the context of the economic institution concerned with the distribution of goods and services in the society; or political parties as organizations operate within the parameters of the political institution concerned with the distribution of legitimate power in the society. These organizations, on the one hand, utilize resources to sustain and perpetuate themselves.[23] On the other hand, however, organizations also effect changes in some respect of the environment consistent with their institutional role. Thus, a business organization may take raw materials and transform them in some way preparatory to their being distributed, or a political party seeks to transform the electorate in such a manner that it will act to distribute legitimate power in a different way.[24]

Throughputs and Outputs. It is apparent that the term "input," used in the above fashion, refers to two qualitatively different processes within subsocietal systems. To avoid confusion, therefore, we will restrict the term input to only that "energy" imported by the organization as an open system to sustain and perpetuate itself over time. Those materials, personnel, or information which are being acted upon, consistent with the organization's institutional role, are defined as production throughputs.[25]

Within sociocultural systems the same principles pertain for output, e.g., the system exports materials, information, personnel, and services to sustain itself in its environment. Again with sub-societal systems, however, the nature of outputs is more complex. To be consistent with our preceding comments regarding inputs, we refer to that which has been acted upon by the organization as production output. This is distinct from organization output which is the actual energy expended in terms of materials, personnel, or information used.

Negative Entropy. At the level of sociocultural systems, according to Katz and Kahn, there is a general tendency for the system to "maximize its ratio of imported energy to expended energy."[26] Commercial organizations do so by investment, by efforts to minimize costs of production, by attempts to maximize returns on investments, and the like. As the result of such negative entropy, social systems have the potential to sustain themselves beyond the life span of their membership, as well as the potential to adjust to changes in the environment through modifications of their form, output, or internal components. The fact that some systems do not and subsequently cease to exist suggests the "potential" rather than absolute nature of this ability.

Feedback. In perceiving human organizations as open systems, an important part of the feedback process is the input of information related to organizational decision making. Thus, positive feedback can be viewed as information obtained about the output relevant to further action needed by the organization to sustain and increase existing purposive behavior, thereby replicating past results. Illustrative of the effects of positive feedback upon organizational behavior is Hardins' example of the development of a company's monopolistic control of a market following the principle of "laissez faire" competition, wherein organizational efforts are directed toward controlling as much of the market as possible, thereby maximizing profits.[27] To the extent that the behavior of the organization is successful in producing output bringing about that result, information about that success constitutes positive feedback to the organization and acts to reinforce similar organizational behavior.

With no constraints, such organizational behavior would lead, according to Hardin, to a single business organization controlling and monopolizing the total market. Constraints normally exist, however, and take at least two forms. One form of constraint is environmental and extraneous to the purpose of the organization (e.g., the requirements of competing systems within the environment). The other form of constraint derives from the limitations inherent in any human organization whereby erroneous decisions are made (e.g., errors relative to the purpose of the organization). Negative feedback occurs when the organization has failed to consider the effect of its behavior (beyond that associated with its purpose) upon the environment or occurs as the result of behavior inappropraite to its purpose. Such negative feedback takes the form of information regarding potential or existing sanctions, or of product inadequacies relative to the purpose of the organization. In Hardin's example, information regarding governmental sanctions relative to monopolistic practices, or the failure of the consumer to purchase the organization's product, informs the organization of corrections necessary in terms of its subsequent behavior.[28]

Homeostasis. Considering the sociocultural system, Buckley argues the homeostatic condition is best characterized in terms of ". . . it's functioning to maintain the given structure of the system within the pre-established limits."[29] He views societies as "complex adaptive systems" possessing not only self-regulation but self-direction as a necessity for survival.[30] A slightly varient interpretation of this system condition is offered by Katz and Kahn, who see the homeostatic state at a more complex system level as taking on the function of ". . . preserving the character of the system through growth and expansion."[31] Differentiation, according to Katz and Kahn, is expressed through this process of growth and expansion which they refer to as dynamic homeostasis.[32]

While different interpretations exist, the perspectives of both Buckley and Katz and Kahn regarding homeostasis may be interpreted as advancing what von Bertalanffy has described as the regulative and adaptative usage of the term,[33] and it is in this sense that the term will be used by us. Thus, the steady state of a sociocultural organization at any given time is the result of the environmental exchanges and internal organizational dynamics consistent with the organization's institutional role and environmental constraints. Said in another way, as a purposive system, the organization must adapt its structural arrangements to both its internal system requirements and to the constraints imposed by the local environment and its institutional role.

Differentiation. Within sociocultural systems, Buckley refers to differentiation as a form of the more general characteristic of morphogenesis which "tend to elaborate or change a system's given form, organization, state."[34] Following Maruyama,[35] he suggests that insight into the dynamics of differentiation can be gained by use of the concept of positive feedback, previously discussed, wherein adaptive or non-adaptive organizational behavior leads to greater organizational complexity.[36] Katz and Kahn, on the other hand, ascribe a more evolutionary quality to the process suggesting its inevitability.[37] Whether potential or inevitable, however, the characteristic of differentiation is relevant to organizational life for it points to the nature of the response of the organization to environmental constraints as purposive.

The type of structural changes associated with this morphogenic process of differentiation can be considered at various levels of abstraction. However, regardless of the level being considered, there seems to be two primary forms of differentiation occuring in sociocultural systems. First, differentiation between various systems within the larger societal system occurs, often in an evolutionary fashion. Institutions, for example, can become more and more specialized within society.[38] Second, differentiation within a system can occur. Here, each subsystem of the larger system develops an increasing division of labor characterized by increasing specialization and complexity. In this instance such increases in specialization and complexity have frequently been linked to increases in system size, e.g., the bigger the size of the organization, the more differentiated its internal structure. However, the relationship is far from clear. To some extent, the existence of a relationship between size and differentiation is dependent upon the type of organizational activity. A large industrial firm in one manufacturing area, for example, may be no more complex than a small industrial firm engaged in the same activity. On the other hand, in other types of manufacturing concerns, largeness may be associated with greater differentiation. However, the conditions which determine the presence or absence of such a relationship are relatively unclear.[39]

Organization Structure and Function

To this point we have concentrated upon characteristics of open sociocultural systems which are essentially inherent in the nature of all open systems. Our purpose has been to show that sociocultural systems, such as institutions and organizations, can be viewed as open systems. We turn now to a brief consideration of their structural-functional characteristics. While superimposing a structure upon an open system is unrealistic in that it connotes a static quality to the system inconsistent with the dynamics noted above, it is justifiable in that it permits examination of at least some of the uniformities associated with system dynamics.[40]

Following Parsons, we view the structure of the system as a descriptive device that refers to relative stability underlying the dynamic nature of the open system.[41] To identify these regularities in system process the concept of function is employed, referring to those processes or activities necessary in order that the system will continue to exist. These are, in Parsons' terms, "functional imperatives",[42] and are directed towards maintenance, production, boundary, and adaptation. Subsystems of the larger system develop around these imperatives. Each subsystem can be viewed as evolving in response to basic system requirements associated with time and environmental circumstance.[43]

The function of the maintenance subsystem is to stabilize the system. In particular, this subsystem is concerned with reconciling the needs of the system's membership with the requirements of the system itself. For example, within a business organization the processes by which the organization recruits employees and insures their continued loyalty and support are basically characteristic of maintenance. Other processes falling within the maintenance subsystem of the business organization would include processes directed toward the replacement and upkeep of material inputs such as office furniture, clerical equipment, office space and the like.

The function of the production subsystem centers upon the efficient accomplishment of the system's institutional role. Its primary concern is with successfully organizing and effecting the efforts of the system in bringing about the transformation desired in the production throughput. Business organizations, for example, generally identify production subsystems in terms of their "line operations." Less familiar organizational examples

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of the production subsystems would be the processes associated with patient treatment in the hospital, such as procedures associated with surgery, the distribution and use of various therapeutic drugs, or patient followup practices.

The *boundary subsystem* is most critical in an open system and functions to effectively relate the system to its immediate environment and to the larger institutional system of which the organization is a component part. Its primary concern is with environmental exchange and maintaining social legitimacy for the system. The most obvious example of the role of the boundary subsystem are those practices of organizations associated with public relations, whether the organization is an economic, political, or religious one. Less obvious, but equally important processes of the boundary subsystem are exemplified by the business organization's efforts to encourage investments (inputs) in the form of stock purchases, the political organization's solicitative efforts for funds, or the church's efforts to gain converts. Other processes associated with the boundary subsystems of an organization are those which seek to impose "organizational requirements," such as qualification for organizational membership, standards of acceptable throughput, and the like.

The *adaptation subsystem* is centered upon the function of adapting the system to environmental changes. Its primary concern is not only with reacting to the changing environment, but with anticipating potential changes. Exemplary of this subsystem in sociocultural systems is the research and development activities found in government and business organizations. Less well developed adaptive subsystems are exemplified by processes frequently used by political organizations in sending up "trial balloons," or by the frequent religious conferences held by churches in an effort to tap changes of attitudes or values in the environment.

The function of the *managerial subsystem* is the overall coordination and direction of the energies of the system in terms of its institutional role and the constraints of the environment. Its primary concern is with the overall welfare of the system. Supervisors, principals, foremen, etc., as members of the organization, are most heavily involved in the managerial subsystem. It is, in other words, exemplified by those processes within any sociocultural system concerned with the coordinating and execution of organizational activities. At the highest level, processes in a business organization associated with the allocation of personnel and materials to various subsystems best exemplify the nature of the managerial subsystem. Boards of directors, trustees, etc., also represent this subsystem.

All sociocultural systems fulfill these five functions to some extent. Social organizations as one type of sociocultural system must meet these requirements as well, and, accordingly, possess similar structures. These subsystems, however, may be further distinguished in terms of the "type" of function they center upon. Specifically, one may distinguish between consummatory functions concerned primarily with energy inputs and system existence, and instrumental functions concerned primarily with environmental constraints and the system's institutional role. The maintenance and boundary subsystems can be seen as emphasizing the consummatory functions, while the production and adaptive subsystems emphasize the instrumental functions.

A second distinction among these subsystems is possible in terms of whether the functions upon which they focus are primarily concerned with the internal state of the system or with the environmental context. The maintenance and production subsystems are primarily concerned with the internal state of the system, while the boundary and adaptive subsystems are primarily concerned with external conditions. These analytical distinctions (instrumental-consummatory and external-internal) of the functions of the subsystems may be considered as axes in the development of a four-fold table permitting the cross-classification of the subsystems of the organizations in the manner demonstrated in Figure 3-1.

The management subsystem, performing the coordinating and directing function, is viewed as being at the intersection of the two axes. It coordinates and mediates the other four subsystems in terms of the needs of the total system at a given time or circumstance. Accordingly, the relative emphasis given to one or another of the subsystems within the larger system can vary with the relative importance of internal requirements and/or external pressures and constraints.

The Environment and the Open Sociocultural System

It should be apparent from the preceding discussion that the application of an open systems approach to the study of formal organizations places a great deal of responsibility upon the organizational analyst to consider both the general and specific characteristics of the sociocultural environment within which the organization exists. At one level of abstraction one may, for example, attempt to identify the degree of economic development associated with the context, or the religious orientation dominant therein, with subsequent hypotheses concerning the effect of such contexts upon the organization. However, a more general phenomena under which these, as well as other possibly relevant aspects of the environment of formal organizations can be subsummed is its degree of modernization considered at length in Chapter Two.

In emphasizing the significance to an organization of changes in the degree of modernization of its environment, it is important to consider some of the major differences in ideology and value orientations which form the substance of sociocultural systems existing in traditional and modern societies.[44] A necessary condition for an "ideology," according to Parsons, is ". . . a system of beliefs held in common by members of a collectivity." However, this is an insufficient condition unless there exists "a level of commitment to the belief as an aspect of membership in the collectivity . . ."[45] Value orientation, on the other hand, can be viewed as

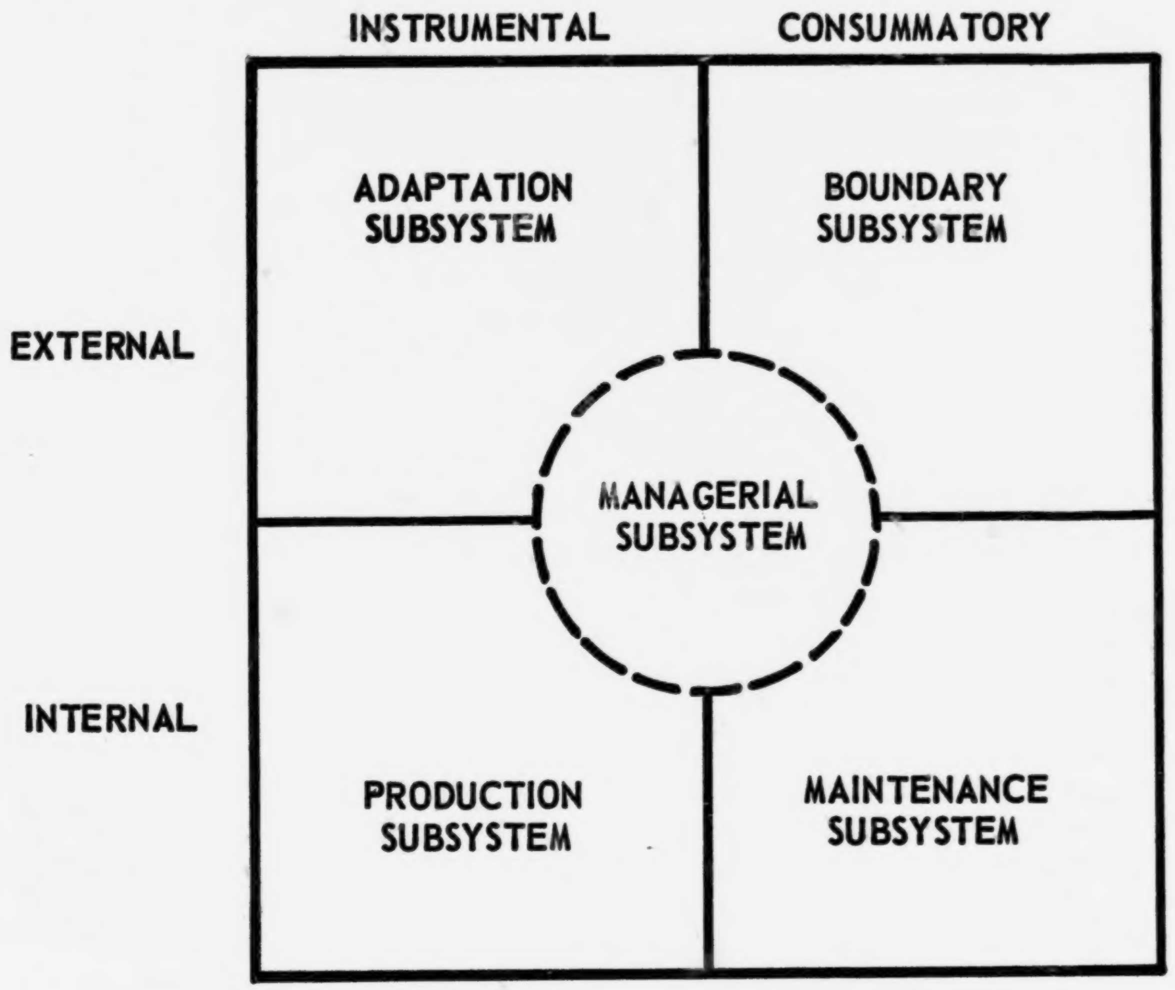
INSTRUMENTAL
CONSUMMATORY
ADAPTATION SUBSYSTEM
BOUNDARY SUBSYSTEM
EXTERNAL
MANAGERIAL SUBSYSTEM
INTERNAL
PRODUCTION SUBSYSTEM
MAINTENANCE SUBSYSTEM

Figure 3-1. Schematic representation of the five subsystems of open sociocultural systems.

". . . a shared symbolic system which serves as a criterion or standard for selection among the alternatives of orientation which are intrinsically open in a situation . . ."[46] Since both ideology and value orientations are part of the same cultural tradition, they tend to be consistent within a given society. This is particularly important in that the ideology provides the subjective "rationality" noted earlier for actions consistent with the dominant value orientation of the collectivity.[47]

In ideal modern societies, value orientations tend to be couched in terms of universal or general values, and individual achievement is appraised in terms of goal attainment consistent with those values.[48] Within such a context, pluralistic goals are expected whose unity lies more in their direction than in their contextual similarity. Thus, modern society maintains a value orientation wherein instrumental performance on the part of individuals is valued and status is granted based upon value-defined goal achievement. Ideologically, beliefs about the importance of the individual in terms of abilities, effort, rewards, and status, as well as general beliefs regarding the standards to be applied relative to behavior across situations, are developed to support the value placed upon achievement as it contributes to the welfare of the larger collectivity.

In contrast to modern societies, ideal traditionalistic societies have been characterized as particularistic in that values are ascribed to individuals, objects, or situations in a unique rather than a general fashion.[49] Behavioral norms and goals tend to be absolute within a situation rather than relative, singular rather than pluralistic. Ideologically, beliefs relative to the sacred quality of past events (e.g., traditional norms, etc.) provide the primary basis for the rationality of behavior consistent with the traditionalistic value orientation. Social mobility, while not absent, is limited because of the highly ascriptive nature of the status system.

These "ideal types" of sociocultural systems may be viewed as the extremes on the modernization continuum referred to in Chapter Two. Although the above discussion has emphasized differences between societies, theoretically within any given society, such as contemporary America, it is possible to consider various institutional and sociocultural contexts as having evolved more or less from the traditionalistic end of the continuum toward the modern end. For example, while the economic sector of American society is generally seen as highly modern, much religious activity in American society is more traditional. In addition, as documented in Chapter Two, geo-political areas (e.g., regions, states, communities) may also exhibit an uneveness in this developmental process. The highly industrialized and urban Northeast is generally thought to reflect a stage of modernization toward which other, less industrialized and urban sections of the country, are moving.

For a social organization, the importance of this assumption of variation in the ideology and values of different sociocultural contexts within a given society lies in its identification of a basis for understanding variation within the organizations themselves.[50] In a more general sense, the more traditionalistic areas of American society may be seen as influencing organizational structure and functioning in ways markedly different from that in the more modern areas. Specifically, we would anticipate that variation between traditional and modern ideology and values in different environments would occasion an organization's sensitivity to different subjective criteria for "rational action," resulting in different consequences for the organization consistent with its "open" characteristic. So, also, such variation in the sociocultural context would be reflected in a differential emphasis upon the subsystems within the organization.

An example of such variation within the institutional framework of politics in American society is the rationality associated with action sensitive to agricultural interests taken by political parties in stable, long established and traditional rural states. Such sensitivity is reflected in the attention paid to negative feedback received from the farm interests in the states and the concommitant insensitivity to feedback from urban residents. In such an established and traditional sociocultural context one anticipates the political organization to emphasize maintenance processes in terms of organizational loyalties along the instrumental-consummatory axis and production processes in terms of dispensing political patronage and meeting agricultural needs along the external-internal axis. The converse of these organizational characteristics would be expected in political organizations found in the more modern and dynamic urban environment--specifically, a sensitivity to urban needs and emphasis upon adaptation and boundary processes.

Summary

In this chapter we have set forth a general model of an open sociocultural system. We have described briefly the nature of open systems, their environments, and the importance of the system/environment exchange. Major characteristics of open systems (input, output, negative entropy, feedback, homeostasis, and differentiation) were discussed and their form of expression in sociocultural systems exemplified. Further, the nature and role of five subsystems (maintenance, production, boundary, adaptation, and management) within sociocultural systems were set forth. Finally, the relationship of the open sociocultural system to its environment was considered in terms of the ideology and value orientations dominant in traditional and modern areas of American society. It was suggested that variation in the degree of modernization of the environment affects both the inputs of sociocultural systems and their subsystem emphases. Chapter Four will apply this general analytic model to the school as an open sociocultural system.

Notes and References (3)

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2. Ludwig von Bertalanffy, "General Systems Theory," in von Bertalanffy and Rappoport, Editors, *op*. *cit*., p. 2.

3. A. D. Hall and R. E. Fagen, "Definition of System," in von Bertalanffy and Rappoport, Editors, *op*. *cit*., p. 18. (This article also appears in Buckley, Editor, *op*. *cit*.)

4. *Ibid*.

5. *Ibid*., p. 20.

6. Heinz von Foerster, "From Stimulus to Symbol: The Economy of Biological Computation," in Buckley, Editor, *op cit*., p. 171.

7. Hall and Fagen, *op*. *cit*., p. 2.

8. von Bertalanffy, *Robots*, *op*. *cit*., p. 74.

9. *Ibid*., p. 76.

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11. Hall and Fagen, *op*. *cit*., p. 18.

12. von Bertalanffy, "General Systems Theory," *op*. *cit*., p. 4.

13. von Bertalanffy, *Robots*, *op*. *cit*., p. 76.

14. Parsons, *Social System*, *op*. *cit*., p. 24.

15. *Ibid*., p. 25.

16. Katz and Kahn, *op*. *cit*., p. 17.

17. *Ibid*., p. 33.

18. See Raymond Aron, Main Currents in Sociological Thought, Volume II, translated by Richard Howard and Helen Weaver (New York: Basic Books, Inc., 1967), pp. 227-232.

19. Ibid., p. 214.

20. It should be noted that our usage of the terms "objective" and "subjective" rationality departs somewhat from previous usage. For instance, Simon distinguishes between "objective" and "subjective" rationality on the basis that objective rationality ". . . is the correct behavior for maximizing given values in a given situation" while behavior is subjectively rational ". . . if it maximizes attainment relative to the actual knowledge of the subject." See Herbert A. Simon, Administrative Behavior, 2nd Edition (New York: The Free Press, 1957), p. 63.

21. Katz and Kahn, op. cit., p. 33.

22. Walter Buckley, "Society as a Complex Adaptive System," in Buckley, Editor, op. cit., p. 490.

23. Such resources are defined as "maintenance inputs" by Katz and Kahn, op. cit., p. 32.

24. Such resources are defined as "production inputs" by Katz and Kahn, Ibid.

25. This usage is consistent with Katz and Kahn, Ibid., p. 20.

26. Ibid., p. 21.

27. Garrett Harden, "The Cybernetics of Competition: A Biologist's View of Society," in Buckley, op. cit., pp. 452-454.

28. It should be noted that "feedback" is seen as a "secondary regulatory mechanism." Such does not preclude "primary regulatory mechanisms," nor is it meant to suggest that information is the only type of feedback to the organization. See von Bertalanffy, Robots, op. cit., pp. 66-69; and von Bertalanffy, "General System Theory--A Critical Review," in Buckley, op. cit., pp. 17-19.

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Chapter Four. The American Public School as an Open Social System

Historically there has been little systematic analysis of the school as an open social system.[1] Some investigators have focused upon the school as a formal organization,[2] and others have treated it primarily as a closed social system,[3] but the fundamentally open nature of the school has not explicitedly been investigated.[4] The thesis of this chapter is that, like other social organizations, the school is an open sociocultural system. It is purposive in nature, has reciprocal relationships with its environmental context, and is adaptive to environmental pressures and constraints. In this chapter we relate the model set forth in Chapter Three to the school as an open sociocultural system. Having done so, we will consider possible consequences for the school of environments varying in their degree of modernization.

The Environment of American Public Schools

A basic element in considering American public schools as open social systems is the identification of the environments in which they are located. In the broadest of terms there are two distinct environments in which such schools exist. One is the societal environment that is common to all schools and which affects them through various institutional arrangements within the society. The other is the subsocietal sociocultural context in which particular schools are located. This latter can vary greatly from school to school, particularly in the degree to which it reflects the modernization process.

Although all schools in American society share some commonalities by virtue of being in that society, every school is located within a variety of subsocietal contexts (e.g., "region," "state," "community," and "attendance district"). These subsocietal contexts can be consistent with respect to their degree of modernization (e.g., a highly modern community within a highly modern state and region) or they can be inconsistent (e.g., a traditional community within a modern state and region). Such inconsistencies have ramifications for the school as an open system. As noted in Chapter Two, the contemporary societal environment of American public education ideally requires schools which emphasize the preparation of persons with technical knowledge and skills and with an instrumental orientation required by a highly complex, industrialized society. Inconsistencies in subsocietal environmental constraints, of course, have consequences for the way in which the school as an open system meets or fails to meet its social institutional role. Thus, institutional arrangements for curricular reform (e.g., the National Science Foundation) exist to facilitate the production of skills and orientations required by the society. However, many American public schools exist in sociocultural environments supportive of more traditional skills and orientations. Under such circumstances the school as a social organization faces a conflict between pressures to meet the requirements of the larger society (e.g., by adopting a new science curriculum) and constraints placed on it by its more immediate environment (e.g., by a failure to support financially the adoption of such an innovation). On the other hand, a school can be located in a more modern sociocultural context which supports and reinforces the pressures from the larger society.

Organizational Structure and Function

We have previously defined a sociocultural system as a set of complex relationships causally related in such a way as to evidence a degree of stability over time in order to effect socioculturally determined ends. At the empirical level these relationships may be defined in terms of organizational role relations, interconnected in such a way as to effect organizational processes directed toward meeting the organizations' maintenance and institutional role requirements. That which from the individual's perspective can be defined in terms of role expectations or behavior can, from the organization's perspective, be defined in terms of the relationships existing between roles which contribute to the attainment of organizational ends. In the substantive area of education the school as a social organization, accordingly, may be viewed as the pattern of relationships between teachers, administrators, clerks, custodians, etc. (However, as will be discussed in detail below, we have excluded pupils from our definition of organizational structure.)

It is important to note that, given these various relationships determined by the requirements of the system, the resultant processes can be seen as constituting the structural nature of the system. The structural components, previously identified as subsystems, can then be differentiated in terms of the particular system function to which they address themselves as stable subprocesses of the system. These subsystems of maintenance, production, boundary, adaptation, and managerial can be identified as realizing themselves in the school as a sociocultural organization somewhat in the following manner.

Maintenance Subsystem. That pattern of relationships among school personnel addressed to sustaining the viability of the organization, particularly (although not exclusively) in terms reconciling the requirements of the system with the individual needs of its personnel, reflects the maintenance subsystem. It is particularly concerned with the socialization of personnel into the organization. New teachers, for example, are frequently assigned to more experienced teachers for a period of time in order to become familiar with "the way the system works." Tradition and precedent become meaningful criteria for decision making among organization personnel exemplified by the expression of "we do things this way in our school," or "we tried that five years ago and it didn't work."

Less obvious, but perhaps of equal importance to an understanding of the maintenance subsystem in the school, is the process by which such factors as responsibility, authority and status are determined within the organization. Studies in education have frequently shown the criteria for the maintenance of such patterns to center around personnel in terms of organizational tenure, grade taught, subject taught or organizational loyalty.[5]

Other aspects of the maintenance subsystem within the school are characterized by processes generally identified with various internal service functions such as clerical and custodial responsibilities. While personnel involved in such maintenance processes generally are considered peripheral to the organization, occasionally they assume a significance disproportionate to their formal status within the organization. The dominant role played by custodians in many elementary schools is indicative of this phenomena.[6]

Production Subsystem. Within the production subsystem of the school are found those processes associated with the pattern of relationships directed toward changing the pupils assigned to it. These would include processes associated with curriculum selection and usage, classroom procedures and policies, testing and grading procedures, utilization of material resources, allocation of time and space relative to subject matter and pupil efforts, and the like. As technological aids are introduced into the school, they also tend to be designated as falling within the production subsystem.[7] This subsystem is central to the purpose of the school, but often is greatly constrained by the diversion of organizational energy to other subsystems in response to pressure from the sociocultural environment.

Boundary Subsystem. The boundary subsystem is of great importance to open sociocultural systems and contains those procedures addressed to organization-environment exchange and legitimation. Accordingly, within the school a large part of the activity of administrations (particularly that labeled "public relations") can be identified as falling within the boundary subsystem. Less obvious, but equally important are those processes of the school which are frequently defined as "service activities," wherein school facilities are utilized by the community for non-educational events, such as when the school sponsors various community affairs, or extracurricular school activities such as musical or athletic events are opened to the community.[8]

A second type of exchange and legitimation associated with the boundary subsystem is expressed in its institutional relationship wherein processes associated with teacher certification and academic accreditation are effected. These processes serve a dual purpose for the organization in that while legitimating the organization within its institutional framework, they are also used in exchanges with the local environment to clarify organizational boundaries and sustain its legitimacy.[9]

Adaptive Subsystem. Relationships in the adaptive subsystem center upon processes wherein the school seeks to adjust to and anticipate environmental changes. The most notable recent example of this process occurring in American education at the institutional level was when the shock of the first Russian "sputnik" produced drastic changes in the societal view of the importance of mathematics and science in education and led to great pressures for a revised curriculum emphasis within the school.[10] Current efforts to desegregate public schools also represent adaptations to shifts in societal expectations. Less dramatic adaptations at the level of the schools include processes associated with the organization's sensitivity and response to changes in the local environment's social or political views, technological innovations within the larger educational system, and changes in educational policies and practices.[11] However, the fact that curricular innovations usually diffuse very slowly within contemporary American education suggests a rather general dominance of the maintenance over the adaptive subsystems.

Managerial Subsystem. Although traditionally associated with policy and administrative positions, the managerial subsystem also is represented by other relationships within the school which coordinate the internal needs of the organization with environmental constraints.[12] Thus, for example, the managerial subsystem coordinates the way in which the allocation of resources to production or maintenance needs is achieved, or the manner in which the school adapts to pressures from its sociocultural environment for classes on "Americanism."[13]

It should be apparent from the above discussion that the relationships which constitute the five subsystems can not be identified exclusively with particular positions or roles. Although obviously a greater portion of teacher energy can be related to the production subsystem than to the other four, teacher energy is also expended within the maintenance, boundary, adaptation, and managerial subsystems. Similarly, although administrative energy is generally associated with the managerial subsystem, it is also devoted to maintenance, production, adaptation, and boundary concerns. However, it should be noted that these subsystem designations are useful primarily for descriptive and analytic purposes. The dynamic quality of any open sociocultural system, as we perceive it, precludes specifying processes associated with these relationships in other than a hueristic fashion. The criteria upon which the structure of the system is postulated are the functions these processes serve, not the position of an organizational member. Thus, the colloquial expression of organizational members "wearing several hats" suggests their simultaneous involvement in different subsystems more than it does their identity with different positions within the organization.[14]

Organizational Characteristics

While there are several characteristics of organizations which must be identified in discussing the school as an open sociocultural system, perhaps none are more crucial than organizational inputs, throughputs, and outputs. Within the framework of the model discussed in Chapter Three, inputs to the school may be identified as materials, personnel, and information imported by the school from its environments. Materials include school, plant and curricular supplies, etc. Personnel consists of teachers, administrators, various educational specialists, along with such service employees as clerks, custodians, etc., all of whom possess competencies required by the organization. Information is represented by institutional and local environmental expectations such as accreditation requirements, and by the knowledge and skills which are to be taught.

The output of the school as an open sociocultural system can be identified as the energy (both human and material) used in sustaining the school and in fulfilling its institutional role. The energies used for survival may be considered as a form of "maintenance" output, similar to that energy used by the individual in meeting his physical or psychological needs. Energy output used in fulfilling its institutional role, however, is not as readily evident, for it is reflected in the energies expended by the organization in transforming the pupils in ways consistent with institutional constraints. While ideally such output can be viewed as those energies (human and material) directed toward changing the students, it is possible to view such "production" output indirectly in terms of that knowledge, skills and orientations required by the larger society and possessed by the pupils at the time they terminate their relationship with the school. A school's dropout rate and/or the proportion of graduates who go on to further education is indicative, then, of production output.[15] Within an open systems perspective, production throughput as well as production output can be represented by pupil behavior. However, while the output is characteristic of some terminal state of pupil behavior, throughput is represented by all intermediate states.

An important characteristic of schools in comparison to other sociocultural systems is the lack of control which the organization has over its production throughput. Pupils enter the first grade with a variety of initial behaviors. They are returned by the organization to the environment each evening, on weekends, and during more extended vacations. While in the environment, they are susceptible to many influences which can run counter to the purpose of the organization. In addition, due to parental mobility, pupils must be transferred from one school environment to another. When these changes are rather widespread (as in the case of the extensive movement of Negroes from rural areas of the South to urban areas of the North) the effects of throughput mobility upon both the sending and receiving school attendance districts can be dramatic. Thus "quality control" problems with respect to production throughputs are particularly severe in the case of schools as open sociocultural systems.

Implicit in the above discussion of production outputs and throughputs is the assumption that the pupils are not part of the structure of the school as a social organization. This may seem strange to those accustomed to viewing pupils as "members" of the school, but is quite consistent with a general systems approach to sociocultural systems. Although the school's purpose is socialization and its production throughput is human, *from the standpoint of the organization as an open sociocultural system*, pupils are identified as being outside its structure much like patients in a hospital, livestock in a meatpacking plant, and pig iron in a steel mill. They are the raw materials being acted upon by the organization and, therefore, are not necessarily a part of its formal structure.[16]

Let us turn now from the inputs, throughputs, and outputs of the school as an open sociocultural system to the additional characteristics of homeostasis, differentiation, and feedback. The homeostasis of the school may be viewed as an ongoing effort by the organization to meet its internal needs consistent with the constraints imposed upon it by institutional and local environmental requirements. The school must concern itself, in other words, not only with adequate inputs and their efficient use (which may be perceived as a form of internal homeostasis), but must take into consideration the influence of institutional requirements and local needs in maintaining a steady state.[17]

Thus, for example, the organization in attempting to fulfill its institutional function may wish to allocate energies to the utilization of new technological innovations consistent with the adaptive process. At the same time, however, the local environment may be indifferent or opposed to such a change and constrain the organization in this regard in favor of allocating available energies to other developments (e.g., a stronger football team). At the same time, institutional changes can require the introduction of new curriculum consistent with the school's institutional role. How the school responds to these diverse requirements and constraints will undoubtedly vary with the degree of modernization of its sociocultural context.[18] As an open system, however, its guiding consideration will be to maintain itself in a viable state.

Part of the way in which this viable state is maintained is through the system's tendency to evolve into a more complex form. This characteristic of differentiation within the school can be manifest in at least three ways: by specialization within the production subsystem, by specialization within the maintenance subsystem, and by specialization of the production throughput. Differentiation occurs in the production subsystem as teachers specialize in the teaching of fewer grades and/or subjects. Within the maintenance subsystem differentiation occurs with the development of a hierarchy of administrative, service, and teaching roles. The third form of differentiation occurs when the organization limits its throughputs to a more restricted portion of the age-grade cohort available as reflected, for example, in the separation of rural 1-12 schools into 1-6 elementary schools and 7-12 secondary schools.

The final characteristic in need of consideration is that of feedback. As stated in Chapter Three, in the case of sociocultural systems generally, feedback is seen to be made up primarily of information. Positive feedback for the school may be considered as favorable information about the schools' graduates. This information can come from the local environment, from educational agencies, or from other educational organizations who are recipients of the organization's output. Negative feedback would be unfavorable information from the same sources.

Since the school is a purposive organization, we can anticipate that negative feedback would be differentially important, dependent upon the sources from which it comes. Thus, feedback from universities, colleges, or powerful political groups in the community could elicit the school's response in terms of modifying in some manner its organizational behavior. On the other hand, feedback from politically weak groups in the community or from educational organizations peripheral to the organization's institutional obligations (e.g., certain vocational schools, some education interest groups, etc.) would have little effect upon the organization's behavior.[19]

This feedback process is further complicated by the relative importance of the various sources from which a school receives feedback. For example, in some circumstances, local environmental support may be far more critical to the viability of the system than in other circumstances. Accordingly, the school would vary in its susceptibility to local constraints and pressures.[20] Public and private schools may be distinguished in this respect, as can public schools in sociocultural contexts of differing degrees of modernization. Or, in an example of another type, given the unqualified support of the local environment to a school, its sensitivity to negative feedback from another environment could be appreciably less than might otherwise be the case. This can be observed when schools in rural school districts suffer disaccreditation rather than improve their plant or staff.

Modernization and the School

To this point we have considered the manner in which structural characteristics and open system attributes are manifested in the school as an open sociocultural system. In the remainder of this chapter we wish to consider briefly the manner in which the modernization process, as discussed in Chapter Two, can be expected to influence the school as an open sociocultural system.

Following Parsons, one of the most important change processes for social systems is the "enhancement of adaptive capacity" which is achieved by structural differentiation and the establishment of a more general "value pattern" consistent with the specialization of subunit functions.[21] At the organizational level, this may be interpreted to mean that structurally, as the environmental milieu of the organization becomes increasingly modern, there is a growing emphasis within the organization upon adaptation and boundary subsystems along the external-internal axis of organizational concern. Thus, we would expect schools in such social settings to place a great deal of developmental emphasis and energy into both the nature of environmental relations and organizational devices which allow it to anticipate possible changes in the environment. So, also, along the instrumental-consummatory axis of organizational activity, production becomes more important than maintenance, and the adaptation subsystem becomes more important than the boundary subsystem.

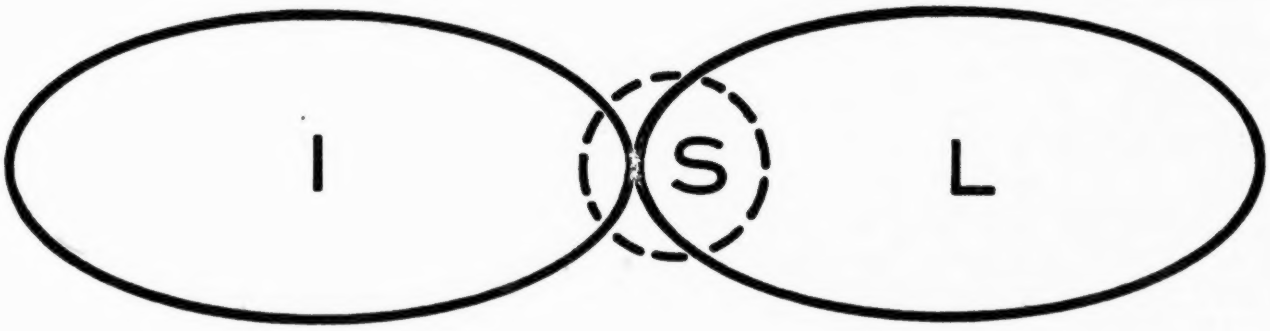
This change, frequently manifest in organizational differentiation, finds substantive expression in the increasing concern of schools as organizations in modern environments with the need to anticipate such things as student population growth, curriculum innovation and development, and post-graduate training for faculty and administrators.[22] Further, the development of local environmental support by institutionalizing mechanisms maximizes the social and financial involvement of the community along the external-internal axis of organizational concern--such as school sponsored social events, publicizing student's academic or athletic achievement, and adult education programs. Along the instrumental-consummatory axis of organizational activity, the modernization process affects the emphasis of the school as a social organization upon classroom efficiency, audio-visual aids, the number of graduating pupils going on to higher education, and the like.[23]

It should be noted that, while these developmental tendencies lead to the stressing of adaptation to environmental constraints, this does not mean that other organizational imperatives are ignored. The question is one of organizational emphasis rather than a choice between alternative organizational behavior. It is possible to speculate that in the developmental nature of organization life, early emphasis must of necessity be upon insuring the effective survival of the organization and meeting its intrinsic needs. Such an emphasis would find strong environmental support in a traditionalistic setting where community expectations are firmly established and social change is resisted, if not rejected. Thus, the "reactionary's" cry for a return to the "3 R's" and a tradition of general education pre-supposes a clearly defined organizational role not entirely consistent with the social complexities of modern life.

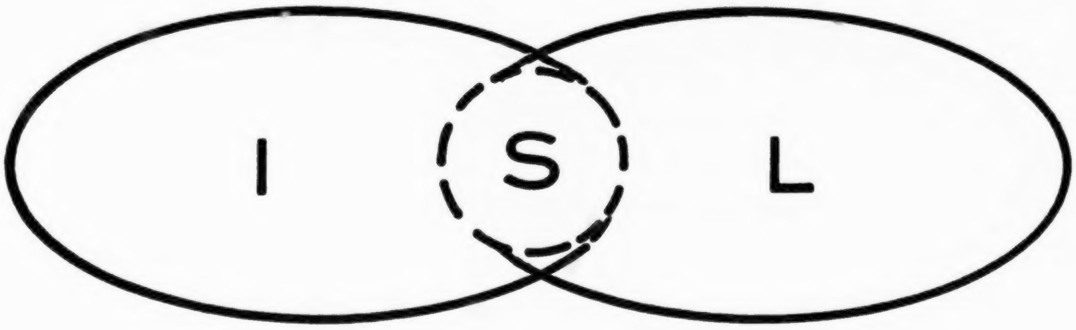
While in the more traditional setting community values and ideology are attuned to local tradition and needs, more modern environmental settings increasingly reflect an ideology and value orientation consistent with the requirements of the larger society. This change is further reinforced structurally by increasing specialization within institutional areas which promotes organizational sensitivity to societal needs, often at the expense of local environmental needs. Such a distinction can be seen in Figure 4-1 which portrays the school as being faced with conflicting pressures from its institutional and local environments in the traditional setting and compatible pressures in the modern setting. As settings evolve from traditional to modern, ideology and values dominant at the societal level diffuse to the local environment, and organizational rationality is given increasing priority over the subjective rationality of the local environment.

The effect of such change upon the organization's system attributes is reflected in the criterion upon which they operate. Thus, as a setting is modernizing, the consequences of a negative entropy balance becomes increasingly expressed by a differentiation which is consistent with the functional requirements of a larger society, as opposed to the local community. Accordingly, we would anticipate that schools in more modern environments would be more responsive to accreditation agencies, professional norms, etc., than would schools in less modern environments. This difference can be explained in part by information feedback changes; for by displacing criteria of a local nature used for organizational decision making with criteria derived from societal sources, the sensitivity of the organization to local environmental pressure is reduced.

Every open system strives for a dynamic homeostasis, i.e., a steady state where the basic character of the organization is maintained. In the case of the school as a social organization this effort is reflected generally in the balance strived for between meeting the environmental demands of the local community and the institutional demands of the larger society.[24] As an ongoing process, such demands vary over time, as does the effectiveness of the feedback process which attunes the organization to both institutional and environmental forces. Thus, in a traditional environment, we would anticipate that the organization would be so dependent upon local support that it ignores or cannot respond to negative feedback from institutional sources, which can result in output inconsistent with the requirements of the larger society, if not in the application of institutional sanctions such as, for example, disaccreditation. On the other hand, an organization in a more modern environment may find itself in a situation where it had ignored many of the pressures of the local environment (such as in a lower class slum neighborhood), leading to an opposition of parents and pupils to the efforts of the school. Logically related to the nature of the changing emphasis in the subsystem and modification of the criterion upon which the system operates in different environments is the "openness" of the system and the emphasis placed upon its institutional role by the organization. The organization would necessarily be more open to institutional cues in



a. Traditional Setting



b. Modern Setting

Figure 4-1. *Schematic representation of institutional (I) and local (L) environmental influences on American public schools (S) as open sociocultural systems, in traditional and modern settings.*

the more modern context by virtue of their compatability with local environmental pressures. By way of contrast, however, the receptivity of the organization to local pressures would likely be inhibited to the extent that institutional constraints would have priority in organizational action. Also important is an increased emphasis upon the institutional role of education in order to be more in harmony with modern social needs. While the intrinsic function associated with maintenance is not ignored by the school in highly modern settings, its importance for organizational action is reduced. This modification may be adduced, as well, by considering the substantive value and ideological grounds upon which organizational rationality leads to organizational action in a modern social setting. To the extent that such a setting places value upon plural goals and individual achievement and development, the process of maintenance becomes of secondary importance to the organization. The organization in a very special sense becomes, "other directed," with the "other" being defined in terms of the larger society. By way of contrast, organizations in more traditional settings are forced to rely upon the subjective rationalization of the local environments. In such settings, organizations have less need to be sensitive to a variety of demands, for their role tends to be defined in terms of specific local values and beliefs. Accordingly, organizational energies are much more directed toward the intrinsic requirements associated with maintenance.

Returning to the school as a social organization, the modification of the subprocesses in terms of institutional criteria can be exemplified in modern environments by the explicit or implicit student allocation processes developed within the organization--a tracking system based upon institutionally approved "objective" criteria such as age, grades, and ability test scores. Other examples of such concern are organizational acquiescence to the attempts of regional or national accreditation organizations to define "adequate education" in terms of societal norms rather than local requirements, or to legislatively imposed qualifications for teachers and administrators entering the local organization, or nationally imposed standardized testing programs to determine both ability and achievement among local populations of students. In contrast, traditional social contexts, while in some instances paying lip service to such institutional priorities, tend to separate students on socially ascriptive bases within the organization, circumvent or ignore the accreditation requirements, use informal and local standards for teachers and administrator qualifications, and minimize the value of standardized test results in appraising student ability and achievement. The latter is well illustrated by resistance, primarily located in the less modern areas of the United States, to such federally sponsored programs as National Assessment.

Schools in modern sociocultural contexts would tend to define their primary responsibility as organizations in terms of maximizing the preparation of their pupil population for adult roles. In contrast, the emphasis in traditional social contexts would tend to be on pupil achievement in terms of competence in traditional subject matter which may or may not be related to subsequent adult behavior. While at the level of the individual, differential emphasis may appear to produce equal results (i.e., graduation from secondary school), the differential expenditure of organizational effort shows significant differences with regard to actions taken. Thus, while organizations in more traditional areas expand a great deal of effort in assuring minimal competence in such traditional subject matter areas as reading, writing, arithmetic, and history; organizations in more modern settings show a greater concern with instructional arrangements which emphasize new curricula as well as such technical skills as typing and driver education, all of which reflect the changing adult role in a modernizing society. So, also, schools as open systems in traditionalistic settings display much more concern with questions of internal order and control as a logical expression of their concern that the traditional mores and norms be upheld. On the other hand, schools as open systems in the more modern settings place more emphasis on the development of viable school-community support for their institutional role.

Summary

In this chapter we have applied the general systems approach outlined in Chapter Three to the American public school as a social organization. We distinguished two basic environments in which the school is located and with which it must interact. The societal environment is common to all schools and affects them through various institutional arrangements within the society. The other environment was identified as the subsocietal sociocultural context in which particular schools are located. This can vary greatly from school to school, and is multidimensional.

With respect to organizational structure and functioning, we identified the processes and relationships indicative of the maintenance, production, boundary, adaptive, and managerial subsystems. It was also noted that these subsystems are abstractions and are useful primarily for descriptive and analytic purposes.

Also identified were important organizational characteristics of schools as open social systems. The input of the school as an open sociocultural system was identified as materials (school plant, curricular supplies, etc.), personnel (teachers, administrators, clerks, etc.), and information (expectations, knowledge, skills, etc.). The output of the school as an open sociocultural system was identified as the energy utilized in maintaining the system (maintenance output) and in fulfilling its institutional role (production output). Production output is most generally represented by the knowledge, skills and orientations required by the larger society and possessed by the pupils at the time they terminate their relationship with the school. Production throughput was identified as pupil behavior at all states prior to termination.

The homeostasis of the school was viewed as an ongoing effort by the organization to meet its internal needs consistent with the constraints imposed upon it by institutional and local environmental forces. Differentiation was seen to take place in several forms--by specialization within the production subsystem, by specialization within the maintenance subsystem, and by specialization of the production throughput. Feedback for the school was identified as information about the school's effectiveness from the local environment or from other educational organizations who are recipients of its output.

Organizational emphasis upon the various subsystems and characteristics in local environments differing in their degree of modernization was considered. Schools in the more modern environments were viewed as emphasizing production and adaptation and those in the less modern environments maintenance and boundary. The differing orientations of schools to positive and negative feedback were also seen to vary with the degree of modernization of the schools' local environment.

Given the above model of the school as an open system and the discussion relating it to the modernization process, we propose in the following three chapters to discuss three attributes of the sociocultural context which can be related to modernization in American society. These are the region in which the school is located, whether it is in a metropolitan or nonmetropolitan location, and the predominate social class membership of its student population. In each of these three chapters we shall consider the manner in which the sociocultural attribute discussed is perceived as varying on the modernization continuum. Subsequently, in Chapter Eight, we shall relate this variation to the model of the school as an open system.

Notes and References (4)

1. For two exceptions, both operating from economic rather than sociological assumptions, see Jesse Burkhead, *et al.*, *Input and Output in Large-City High Schools* (Syracuse, N. Y.: Syracuse University Press, 1967); and J. A. Kershaw and R. N. McKean, "Systems Analysis of Education," unpublished research report (Santa Monica, California: The Rand Corportion, 1959).

2. See, for example, Charles E. Bidwell, "The School as a Formal Organization" in *Handbook of Organizations*, edited by James G. March (Chicago: Rand McNally, 1965), pp. 972-1022; W. W. Charters, Jr., "An Approach to the Formal Organization of the School," in R. E. Griffiths' (ed.) *Behavioral Science and Educational Administration*, Yearbook of National Society for the Study of Education, Volume 63, Part II, 1964, pp. 243-261; Ronald G. Corwin, "Education and the Sociology of Complex Organizations" in *On Education--Sociological Perspectives*, edited by Donald A. Hansen and Joel E. Gerstl (New York: John Wiley and Sons, Inc., 1966), pp. 156-223; Amitai Etzioni, "The Organizational Structure of 'Closed' Educational Institutions in Israel," *Harvard Educational Review*, 27 (1957), pp. 107-125; Graeme Fraser, "Some Properties of Schools as Organizations," *Delta One* (August, 1967), pp. 23-30; and Fred E. Katz, "The School as a Complex Social Organization," *Harvard Educational Review*, 34 (1964), pp. 428-455.

3. See, for example, James Coleman, *The Adolescent Society* (New York: The Free Press, 1961); C. Wayne Gordon, *The Social System of the High School* (Glencoe, Illinois: The Free Press, 1957); David A. Goslin, *The School in Contemporary Society* (Glenview, Illinois: Scott, Foresman and Co., 1965), pp. 19-41; W. W. Charters, Jr., "The School as a Social System," *Review of Educational Research*, 22 (1952), pp. 41-50; and Talcott Parsons, "The School Class as a Social System," *Harvard Educational Review*, 29 (1959), pp. 297-318.

4. There are exceptions to this statement. Empirical studies in which particular attributes of the school's environment have been investigated include Neal Gross, *Who Runs Our Schools* (New York: John Wiley, 1958), and Burton R. Clark, *The Open Door College: A Case Study* (New York: McGraw-Hill, 1960). For exceptions which are speculative rather than empirical, see Albert J. Reiss, "An Introduction" in *Schools in a Changing Society*, edited by Albert J. Reiss (New York: The Free Press, 1965), pp. 1-19; Daniel E. Griffiths, "System Theory and School Districts," in *Readings on the School in Society*, edited by Patricia Cayo Sexton (Englewood, Cliffs, N. J.: Prentice-Hall, Inc., 1967), pp. 175-184; Richard C. Lonsdale, "Maintaining the Organization in Dynamic Equilibrium," in Griffiths, *op. cit.*, pp. 142-177; and Bernard J. Siegel, "Models for the Analysis of the Educative Process in American Communities," in *Education and Anthropology*, edited by George D. Spindler (Stanford, California: Stanford University Press, 1955), pp. 38-49.

5. Bidwell asserts that there is no bureaucratic career as such for teachers. Thus, salary is typically dependent upon training and seniority, not position. Bidwell, *op. cit.*, p. 977. For a discussion of status distinctions among

teachers, see Cole S. Brembeck, *Social Foundations of Education* (New York: John Wiley and Sons, Inc., 1966), pp. 323-326; Ronald G. Corwin, *A Sociology of Education* (New York: Appleton-Century-Crofts, 1965), pp. 217-223; and Robert J. Havighurst and Bernice L. Neugarten, *Society and Education* (2nd Edition, Boston: Allyn and Bacon, Inc., 1962), p. 164. Indirectly suggestive of the importance of the maintenance subsystem for teacher behavior is Charters' critique of research on teaching careers, wherein he seeks to alert researchers to the utility of alternative approaches to some "obvious facts" about teachers. See W. W. Charters, Jr., "Some 'Obvious' Facts About the Teaching Career," *Educational Administration Quarterly*, 3 (1967), pp. 183-193.

6. Wilber B. Brookover and David Gottlieb, *A Sociology of Education* (2nd Edition, New York: American Book Co., 1964), pp. 265-268.

7. These examples, of course, are not exhaustive; nor are they meant to suggest that the less traditional views of the learning process such as that advanced by Schaefer could not be subsumed under the production subsystem processes. Rather, the intent is to typify those processes within the school *directly* concerned with affecting the school's institutional role. See Robert J. Schaefer, *The School as a Center of Inquiry* (New York: Harper and Row, 1967).

8. For a brief discussion of boundary relations between organizations, see Peter M. Blau and W. Richard Scott, *Formal Organizations: A Comparative Approach* (San Francisco: Chandler Publishing Co., 1962), p. 197.

9. That these attempts at legitimacy can have serious consequences for the school as an organization is evidenced by Clark's study of adult education. See Richard O. Carlson, "Environmental Constraints and Organizational Consequences: The Public School and Its Clients," in Griffith, *op. cit.*, p. 263.

10. See, for example, Reiss, *op. cit.*, p. 2.

11. For a discussion of the adaption of new educational practices, see Willard R. Lane, Ronald G. Corwin, and William G. Monahan, *Foundations of Educational Administration* (New York: The Macmillan Co., 1966), pp. 95-98.

12. Anderson discusses one way in which the managerial subsystem "adapts" to outside pressure. He argues that the greater the outside pressure on the school, the greater the presence of bureaucratic rules. Thus, bureaucratic rules seem to be one way in which the managerial subsystem protects itself from the environment. See James G. Anderson, "Bureaucratic Rules: Bearers of Organizational Authority," *Educational Administrative Quarterly*, Volume 2 (1966), p. 26.

13. Among other reasons, Campbell lists the close relationships between the school and its environment as making educational administration somewhat unique. See Roald F. Campbell, "What Pecularities in Educational Administration Make It a Special Case?" in *Administrative Theory in Education*, edited by Andrew W. Halpin (Chicago: University of Chicago Press, 1958), pp. 166-185.

14. An especially good example of this is seen when the principal's role is analyzed. Thus, principals help integrate new teachers into the school (maintenance subsystem), are concerned with curriculum and resource allocation (production subsystem), act as a "go-between" between the school and the community (boundary subsystem), involve themselves in the adaptation of new ideas, policies and practices (adaptive subsystem), and coordinate the internal operations of the school (managerial subsystem). See, for example, Jack K. Hemphill, Daniel E. Griffith, and Norman Frederiksen, Administrative Performance and Personality (New York: Bureau of Publications, Teachers College, Columbia University, 1962); Neal Gross and Robert E. Herriott, Staff Leadership in Public Schools (New York: John Wiley and Sons, Inc., 1965).

15. See, for example, Burkhead, op. cit.

16. Actually there exists considerable support in the conventional literature for our identification of pupils as the "material" processed by the school. See, for example, Stanton Wheeler, "The Structure of Formally Organized Socialization Settings," in Socialization After Childhood: Two Essays, edited by Orville G. Brim and Stanton Wheeler (New York: John Wiley and Sons, Inc., 1966), esp. p. 57; Katz, op. cit., p. 440; and Fraser, op. cit., p. 26.

17. For a description of some of the processes operating in such situations, see Lonsdale, op. cit.

18. Along this same line, Cocking found differences, by cosmopolitanism of the school, concerning the adaption of new educational ideas. See Lane, Corwin and Monahan, op. cit., p. 97.

19. Reiss asserts that generally the strongest "pressure groups" tend to lie astride the immediate environment of the schools. See Reiss, op. cit., p. 3.

20. Also, Lane, Corwin and Monahan assert that early studies in education indicate that local control of the school produces greater adaptability. See, Lane, Corwin, and Monahan, op. cit., p. 16.

21. Talcott Parsons, Societies: Evolutionary and Comparative Perspectives (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1966), pp. 21-24.

22. Reiss, op. cit., pp. 8-9.

23. Reiss asserts that today most changes in schools come ". . . largely on a response to external crises and organized efforts rather than as a response to definitions of problems generated within school systems." Ibid., p. 2.

24. Warren provides an interesting discussion of the relations of community "subsystems" to one another and to the larger society. For his discussion of the school in this regard, see Roland T. Warren, The Community in America (Chicago: Rand McNally and Co., 1963), pp. 175-177.

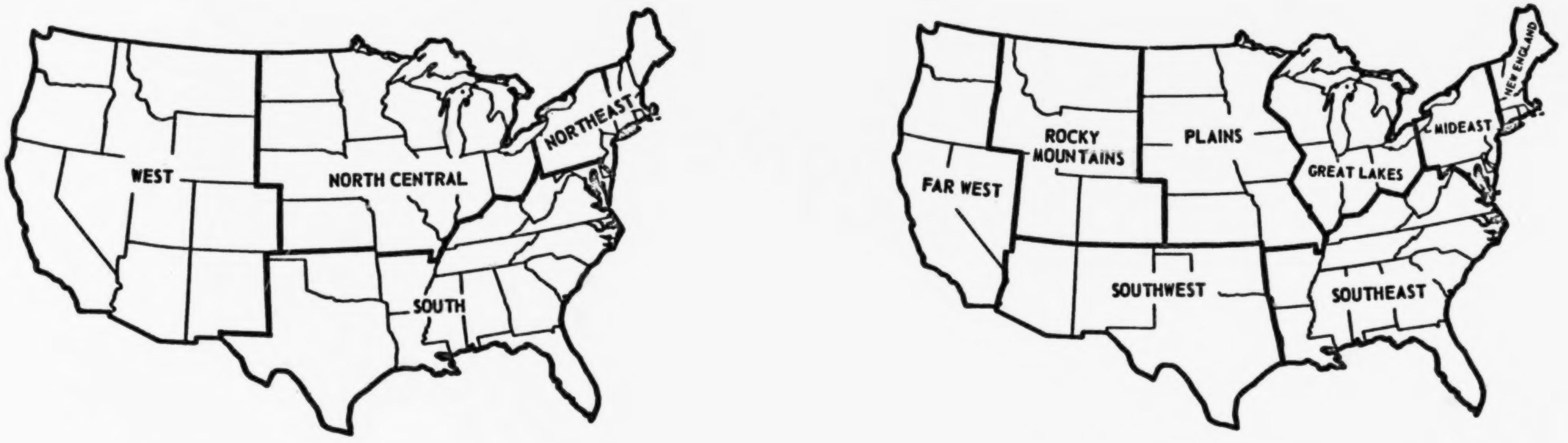
Chapter Five. Regional Variations in American Society

With the development of mass media and a complex transportation system, emphasis is often given to apparent similarities among various regions within American society.[1] And, quite naturally, one might expect that due to the general modernization of American society the cultural heterogeneity among American regions has been, and will continue to be, reduced. Acknowledgement of this expectation, however, does not warrant the dismissal of existing regional differences.[2] Historically, differences among regions in terms of culture and development have been observed repeatedly.[3] While, for purposes of cross-cultural comparisons, it may be useful analytically to characterize American society as homogenously modern, the effects of regional variation upon various aspects of formal education are too significant to ignore in any study of the effects of sociocultural context upon the school.[4] Thus, it is important to consider regional variation in modernization. It is also important to consider how such variation may be reflected in the ideology and value orientations of individuals and thus in organizational differences in education.

Classical and Contemporary Definitions of American Regions

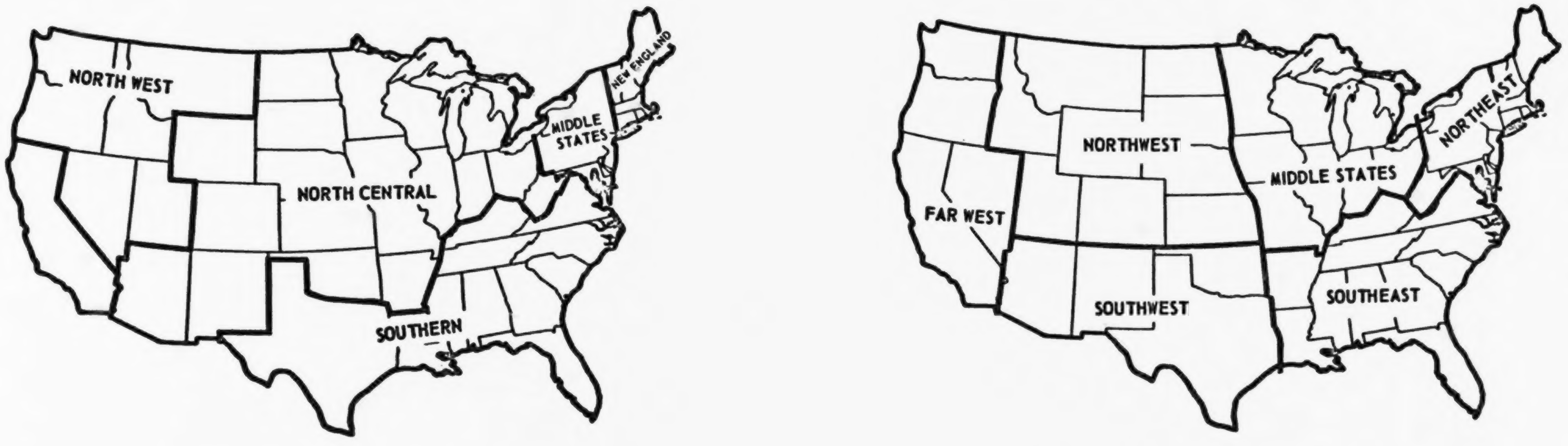
The concept "region" has been used in many ways by various individuals and agencies.[5] Relational terms such as "North," "South," "East," and "West," are often used with varying degrees of precision to differentiate among various geographical areas of the United States having current or historical significance. In addition, geographical areas have often been roughly identified by their proximity to rivers (e.g., Tennessee Valley Region), mountains (e.g., Appalachian Region), and by factors associated with their settlement (e.g., New England Region). Originally there were two American regions, a North and a South. As settlement began to expand westward beyond the Appalachian mountains, the North was differentiated into an East and a West, and then the West into a series of more and more "wests" characterized by such terms as Northwest, Midwest, Southwest, and Far West.[6]

The two major formal definitions of region currently used in the reporting of statistics about education in America are those of the U. S. Bureau of the Census and the U. S. Office of Education. The Burea of the Census subdivides the United States into nine Geographic Divisions which are generally combined into four regions identified as Northeast, North Central, South and West (Figure 5-1A). The Office of Education, however, subdivides the United States into eight regions identified as New England, Mideast, Great Lakes, Plains, Southeast, Southwest, Rocky Mountain, and Far West (Figure 5-1B). A third formal division of the United States for purposes of collecting and reporting educational statistics is that represented by the five regional associations of secondary schools and colleges. These encompass all states with the exception of California and are identified as New England, Middle States, North Central, Northwest, and Southern (Figure 5-1C).


WEST
NORTH CENTRAL
NORTHEAST
SOUTH
FAR WEST
ROCKY MOUNTAINS
PLAINS
GREAT LAKES
MIDEAST
NEW ENGLAND
SOUTHWEST
SOUTHEAST

A. U. S. Bureau of the Census

B. U. S. Office of Education


NORTH WEST
NORTH CENTRAL
MIDDLE STATES
NEW ENGLAND
SOUTHERN
NORTHWEST
FAR WEST
MIDDLE STATES
NORTHEAST
SOUTHWEST
SOUTHEAST

C. Educational Accrediting Associations

D. Regional Delineations of Odum & Moore

Figure 5-1. Four conventional regional distinctions relevant to the study of American public education.

By far the most systematic attempt to develop the "best possible" regional delineation of the United States is that of Odum and Moore published in 1938. They sought answers to a series of important questions:

> What . . . are adequate regions, acceptable as frames of reference for research and portraiture, as basic divisions for administrations and planning, and as fundamental, yet flexible, units in the totality and union of the states . . . ? What is the nature and size of those regions best suited to the largest number of purposes and how may they be determined? What are the limitations of regions too small and too numerous or too large and too few? What are the limitations of the incidental regions chosen for convenience or for political ends?[7]

After surveying the use of the term "region" in literature, journalism, historical works, as well as in social research and governmental administration, and after extensive evaluation of several hundred statistical indices, Odum and Moore identified six major regions of the United States: Northeast, Southeast, Middle States, Northwest, Southwest, and Far West (Figure 5-1D). Their six regions maintain the integrity of state boundaries and "approximate the largest degree of homogeneity measured by the largest number of criteria for the largest number of purposes."[8] However, they point out that an even closer approximation of sociocultural homogeneity could be represented if it were not necessary (for data collection purposes) to adhere to state lines as regional boundaries.

In any study of the regional effects on the school as an open social system, it is necessary to delineate a series of sociocultural areas sufficiently unique from each other to reflect expected differences in the structure and functioning of the school as a social organization. While we would ascribe the primary basis for this uniqueness to certain sociocultural factors, it would be a major oversight to ignore the effect of important socio-historical factors. Thus, we needed to take into account both elements in identifying a set of regions. Our approach is what Vance has referred to as the cultural statistical method,[9] using the state as the basic administrative unit.

For purposes of discussion and subsequent analysis, the concept "region" is defined as *a limited number of coterminous geopolitical states in American society sharing a similar sociocultural environment, which differ to a significant degree from other sociocultural environments by virtue of historical circumstance and degree of socioeconomic development*. It must be noted, of course, that any set of regional designations is simply an arbitrary device for distinguishing among physical areas believed to vary in some significant manner. As Wirth has pointed out, in reality those variations do not end at political boundaries, nor are they shared with equal intensity by all groups found within a specified area.[10] Still, the term has both heuristic and analytical utility in distinguishing among the significant sociocultural forces that influence the modernization process and thus the school as a social organization.

Region and Modernization

In our efforts to develop an ideal set of American regions which reflect in varying ways the ideology and values underlying the modernization process and which we expect to reflect differences in educational structure and functioning, we weighed carefully the alternatives presented by the Bureau of the Census, the Office of Education, the educational accrediting associations, and by Odum and Moore. After comparing each available alternative with the modernization scores for each state developed in Chapter Two, we selected a slight modification of the Odum-Moore approach. Figure 5-2 presents a characterization of our five major regions of the United States, along with the modernization score for each state. We have identified the five regions as Northeast, Southeast, Great Lakes, Plains, and Far West. The major distinction between the Odum-Moore approach and ours is with respect to the Plains areas and with the state of West Virginia. Odum and Moore characterize our Plains areas as two distinct regions (Southwest and Northwest), and they place West Virginia in the Northeast rather than in the Southeast. We feel that our modification in combining their Southwest and Northwest is warranted due to the similarity of their modernization scores (both are equal to -0.61) and in the case of West Virginia by the fact that the modernization score for this state is far more similar to its bordering states in the Southeast than it is to those in the Northeast. Our decision with respect to West Virginia also conforms to the Regional definitions of the Bureau of the Census and the Office of Education, but not with that of the educational accrediting associations (Compare Figures 5-1A, 5-1B, and 5-1C).

Table 5-1 presents a listing of our five proposed regions along with a regional modernization score computed by weighing each state's modernization score (see Table 2-2) by its population in 1960. It is apparent in Table 5-1 that the Northeastern region is the most modern, followed closely by the Far West, and then by the Great Lakes, Plains, and the Southeast. Considering the nature of the indicators which make up the modernization score, the variations in urbanization, industrialization, specialization, level of living standards, and economic development between the various regions are considerable. These structural, economic, ecological, and technical variations are, of course, well documented.[11] Less apparent, but of equal relevance to any discussion of the influence of the sociocultural context upon the school as a social organization are the ideological and value differences associated with overt variations among these five regions. For, as we have suggested in our discussion of the school as an open system, the beliefs and values dominant in the environment are instrumental in determining the school's organizational structure and functioning--the importance it gives to internal and external elements, its sensitivity to environmental demands, and the type of output it seeks to produce.

Fundamental Differences Among American Regions

Unfortunately, social science research data documenting regional variations in ideology and values are not as readily available as are data on the more overt manifestations of modernization. However, what little data that are available on such regional variations tend to support our thesis that beliefs and values vary between the less and more modern

Table 5-1. Population and Modernization Scores in 1960 for Five "Ideal" Sociocultural Regions.

Region[a]	Population (1960)	Modernization Score[b]
Northeast	48,224,000	4.80
West	20,624,000	4.53
Great Lakes	46,716,000	2.50
Plains	23,381,000	-0.61
Southeast	38,754,000	-3.44

[a] See Figure 5-2 for definition.

[b] See Table 2-2 for components.

regional contexts and in a systematic way. In studies of voting, authoritarianism, values, attitudes, and opinion, significant regional differences have been reported.[12] While the evidence is not always consistent, it would appear to be generally true that the less modern regions of the country (as defined in Figure 5-2) are more conservative and traditional in their ideology and values than are the more modern regions.

While "hard" data regarding such differences are limited, a wealth of literary evidence is available on American society to establish brief descriptive vignettes in terms of the ideological and value differences previously cited. Based upon historical documentation, ecological considerations, and personal observation by such keen observers of the American scene as de Tocqueville,[13] Brogen,[14] Beals,[15] and Turner,[16] the vignettes which we shall present below offer a synthesis of the historical and contemporary factors associated with regional variation in ideology and values. Because the Northeast and the Southeast are both the oldest regions in American society and are at the extremes in terms of our modernization index, we shall discuss them first and in greater detail than the three other regions. The Great Lakes, the Plains, and the West will be discussed only to the extent of identifying what is perceived to be their sociocultural uniqueness. We turn first to the most modern of our regions, the Northeast.

Northeast. The legendary story of America prior to the great 19th century westward migration is primarily the image of the establishment and growth of what we have here identified as the Northeast region of the United States. Although the Southeast was colonized concurrently with the Northeast, most Americans see in the symbols of Plymouth Rock, Bunker Hill, Lexington and Concord, Valley Forge, the Puritans, the Boston Tea Party, Independence Hall, etc., (all found within the Northeast) a representation of America's ideals and beliefs. The escape from religious tyranny, the fight to establish a viable western civilization on the shores of a hostile continent, the resourcefulness of the early settlers in overcoming a wilderness and its native inhabitants, and ultimately the fight against foreign rule leading to the establishment of a republic are historical materials associated in large measure with events occuring within the Northeast. It is from such experience that the ideological elements and values generally identified with the larger contemporary American society emerged.

There seems little doubt that religious conviction played a significant part in the early settlement patterns of the Northeast.[17] Protestant in large measure, and in rebellion against the established Church of England, the beginnings of many New England states were essentially attempts to set up autonomous theocracies within the colonial system. Curiously, the pattern of religious persecution from which these groups fled was repeated by them in America. In contrast to New England, colonies in what has been referred to as the "Middle Colonies"[18] (including New York, New Jersey, Pennsylvania, Delaware, and Maryland) did not stress religious conformity to the same extent, although the pattern of flight from the religious dogmas of the Church of England was basic to these colonies as well as to those in New England.

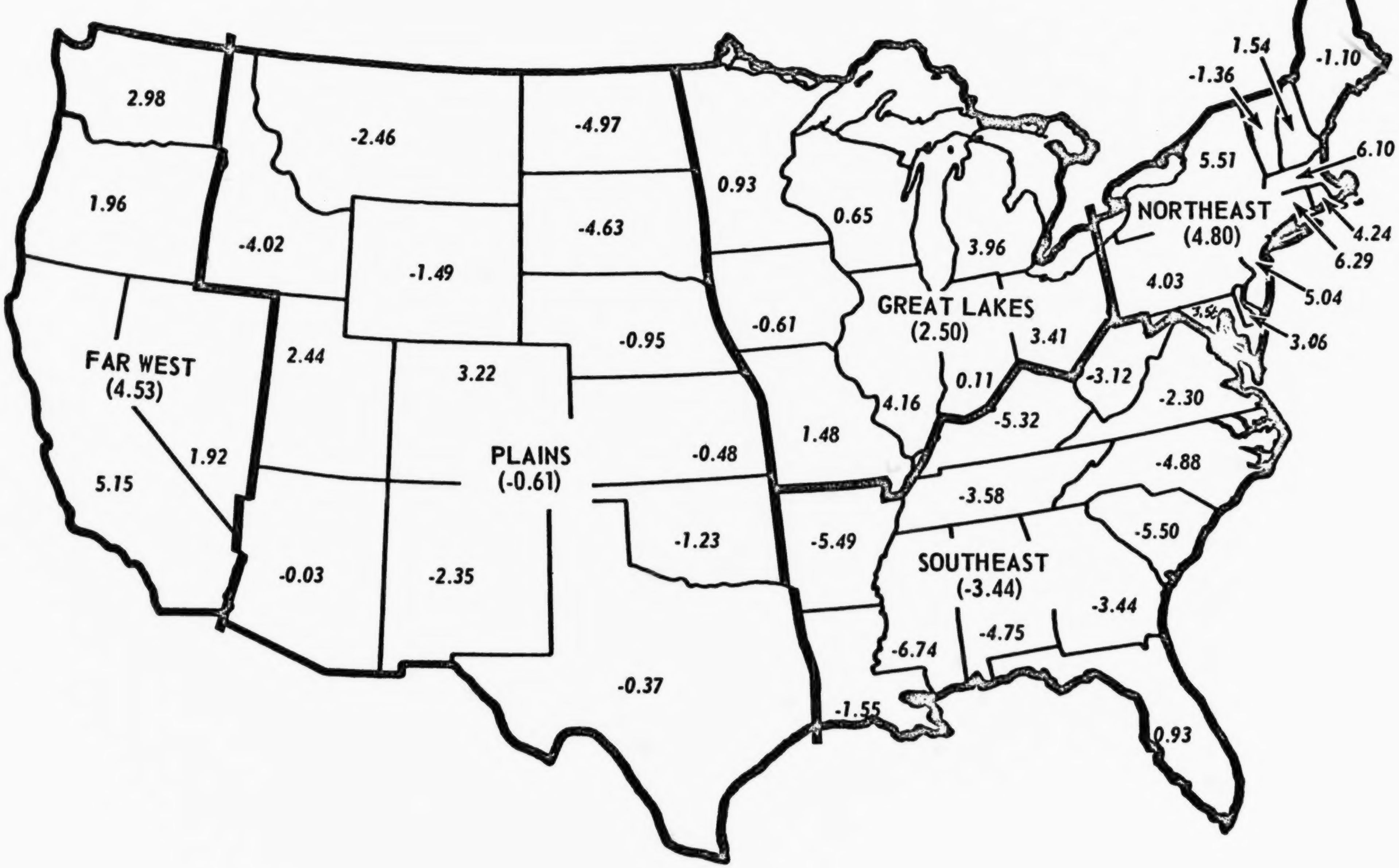

2.98
1.96
FAR WEST
(4.53)
1.92
5.15
-2.46
-4.02
-1.49
2.44
3.22
-0.03
-2.35
-4.97
-4.63
-0.95
PLAINS
(-0.61)
-0.48
-1.23
-0.37
0.93
-0.61
1.48
-5.49
-1.55
0.65
3.96
GREAT LAKES
(2.50)
3.41
0.11
4.16
-5.32
-3.12
-2.30
-3.58
-4.88
SOUTHEAST
(-3.44)
-6.74
-4.75
-3.44
-5.50
0.93
1.54
-1.36
-1.10
5.51
6.10
NORTHEAST
(4.80)
4.24
6.29
4.03
5.04
3.56
3.06

Figure 5-2. Five "ideal" sociocultural regions of the United States. (Open figures indicate state modernization scores. Figures in parenthesis indicate region modernization scores.)

Differences to an extent are explained by the more heterogeneous ethnic colonization patterns in the middle colonies.[19] In both instances, however, morality based upon religious beliefs had from the beginning been a significant characteristic. In an age when formal religion was an integral part of man's daily life, behavior was consistently judged in terms of absolute religious principles of "right" and "wrong," "good" and "bad."

Although it is true that the early Northeast was characterized in large measure by an absolutist religious philosophy regarding the nature of man (particularly in New England), it is equally true that the content of this philosophy was instrumental in establishing the importance of individualism, work activity, and material reward to the American credo. Well articulated by Weber and others, the Protestant convictions accentuated the importance of the individual's working to achieve this end. Since this end was not something that could be attained by inheritance, little credence was given to wealth per se, but a great deal was given to the man who "proved" his worth by his own efforts. Material wealth, as a consequence was desirable not only in terms of its tangible rewards but in terms of its socio-religious connotations. So, also, achievement as a manifestation of one's efforts was valued in its own right.

It has frequently been said that the belief in pragmatic rationality, progress, and equality were also attributable to Protestant theology's role in American society. While there is little doubt that these beliefs are not antithetical to Protestantism, one may question the appropriateness of their being so designated in the case of the Northeast's historical development. Much cross-cultural evidence is available to the contrary.[20] However, more germaine to this development historically has been the environmental constraints and experiences to which settlers in the northeastern region were exposed. Faced with the exigencies of frontier life, lacking mother country support, and imbued with the credo of work and material rewards, early northeastern settlers had to be "pragmatic" in order to survive.[21] Such pragmatism required a discarding of beliefs regarding ascribed differences among men in favor of a belief in man's intrinsic equality, the variability of which was distinguished on the basis of performance in meeting the needs of the larger group. In a large measure it was the success of this approach over time in an environment highly favorable to its articulation that was the basis for the development within the Northeast of a belief in progress and achievement--a belief particularly related to secular and material aspects of life.

Finally, in considering the belief and value placed upon external conformity in the Northeast historically, it is necessary to recognize that, at least for this region, Reisman's thesis that Americans have modified their position from an inner to an other directed orientation is suspect. As de Tocqueville, Brogen, and others have observed, Americans have always been extremely sensitive to the wishes of others.[22] Indeed, if one but considers the intolerance of dissent found in early New England, the subsequent pattern of community migration from New England, and the expulsion of the conservative Torys from New England and the middle Atlantic states following the Revolutionary War, it is apparent that conformity has long been characteristic of this region. The expression of individualism, while highly cherished as an ideal, has been tolerated only within the proscribed limits of the communities' values and norms. Historically, it has not been pervasive in all segments of social behavior.[23]

In the preceding discussions we have stressed the historical basis for the particular ideology and values often cited as being characteristic of the northeastern region. While such a credo would explain in part its emergence as the most modern region of American society, other regions share to some extent the same beliefs and values. Thus an analysis of why this region should have developed more rapidly than the other four requires further elaboration. Such an elaboration would seem to entail (a) its historical precedent, and (b) its geographic location. We shall comment briefly upon each of these.

In part, the Northeast's high level of modernization may be attributed to its early development in the broader context of American history. Having quickly established, relatively speaking, an industrial base and a surplus of labor to utilize in its growth, being less encumbered by a traditional agrarian heritage and emerging early as the commercial and financial center of the new nation, the Northeast early reached a relatively high level of modernization. Having initially outstripped its only regional competitor early in the 19th century (if not before), it could benefit from the subsequent exploitation and development of the other geographic regions in American society. The much vaunted "know how" of the Yankee can be attributed in no small measure to the secure commercial, industrial, and financial base from which he operated. Supplying skills and products needed for the development of a nation produced an accumulation of capital which was reinvested within the Northeast region leading to its further development. So, also, as the center of the national culture, it attracted talents from other regions, which further contributed to its relative stature.[24]

This early development of the Northeast may be attributed in part also to its geographic circumstance. Its land, never considered particularly good for agriculture, was rapidly exploited. Thus, a surplus of population for westward and urban migration quickly developed. Additionally, by virtue of serving as the nation's major port of entry (New York, Philadelphia, and Boston), this region received many immigrants who possessed orientations and skills compatible with urban life and industrial requirements. There was, therefore, a ready supply of manpower in excess of agricultural needs relatively early in the region's history. The fact that beliefs and values dominant in the region enhanced its susceptibility to modernization is, in some respects, fortuitious in that geographic circumstance provided the most favorable conditions for its development.[25]

The preceding discussion can serve as a background for identifying the regionally unique ideology and value orientation of the Northeast. It must be remembered, of course, that the constellation of beliefs and values to be discussed are shared by other regions as well. The uniqueness of this region rests in the differential emphasis, as well as the manner in which a particular belief or value is construed within the region. With these qualifications in mind, the northeast region may be said to emphasize material reward and progress to a greater extent than other regions (with the possible exception of the West). The historical emphasis in this region has been upon technological and economic development. The achievement of these material ends has required a commitment to, a belief in, and a value of progress highly consistent with the cumulative effects of technical and economic growth.

Other major beliefs and values have, in contrast, assumed a lesser importance and have, to some extent, been modified over time from those of the larger society. The belief and value placed upon traditional morality has become increasingly redefined in terms of social morality--more relativistic than absolute, more secular than sacred.[26] Consistent with the interpretation of Kluckhohn and others, the demands placed upon the individual in a highly modern region for conformity in organizational life appears to have led to a growth of belief in, and valuation of, individual development (as opposed to individualism).[27] This modification, in turn, is associated with a relative de-emphasis upon work activity and increased emphasis upon activities associated with individual growth and gratification. One of the apparent paradoxes of modern society seems to be that as organizational constraints increase, individual constraints are reduced, thereby relaxing the requirement of conformity in many areas of life outside of one's occupational role. Whether this is attributable to the ecology of urban life, or a concommitant of the universalistic social relationships necessary in a highly specialized social context, is unclear. However, its influence upon the "life style" of residents in the Northeast has to some measure differentiated them from other regions of the country--with the possible exception of the West.

The Southeast. Most apparent, the Southeast is the least modern of the five regions of the United States identified in Figure 5-2. Although, like the Northeast, it is one of the older regions within American society, its history is, in many respects, a story of resistance to the modernization process so apparent in the Northeast. It is by contrasting the Southeast to the Northeast that the most pronounced regional differences in the United States in beliefs and values can be articulated.

To understand the sociocultural uniqueness of the Southeast, it is necessary to consider the historical antecedents of its regional development. Unlike the Northeast, settlement of the Southeast by and large was not a settlement of religious dissenters. It was, rather, a colonial settlement pattern predicated in large measure upon commercial exploitation or personal gain. Many settlers were originally brought over to clear and develop large royal grants of land for the British aristocracy. Others came to seek their fortune. Accordingly, no real opposition to traditional authority patterns existed in the initial settlement of the region.[28]

The fact that such a close connection with the "mother country" ultimately was broken by the Revolutionary War in no way detracts from the conservative political and economic origins of the region's early settlement. Ample evidence suggests in fact that in both North and South, loyalty to the crown was prevalent in from one-third to better than half of the colonies' population. Zimmerman and DuWors suggest that beyond this, commercial interests of the South had more to lose by the Revolution and thus were more reluctant to participate.[29] Further, although Virginia contributed disproportionately to Revolutionary leadership, it was a leadership seeking colonial autonomy to perpetuate the existing agrarian system rather than to develop a different political and economic order.[30]

This pattern of traditional political and economic forces holding dominance in the Southeast region was matched in large measure in the southeastern religious institution. Prior to the Revolutionary War, the Anglican Church was the established religious authority in the southeastern colonies.[31] With the end of the War and the subsequent westward expansion, fundamentalism (ideologically conservative in nature) succeeded Anglicanism as the dominant religious ethos of the region. The success of fundamentalist denominations in the Southeast introduced a religious morality and individualism heretofore lacking in the region. Unlike the morality and individualism of the Northeast, however, its theological base was not Calvinist in origin and thus did not lead as in the New England area to an emphasis upon worldly achievement and collective responsibility. It was, rather, a morality based upon submission to "God's will" in making the best of a generally poor lot. Such a morality, based upon scripture and emotional commitment, was highly personal in nature and associated with salvation through individual reform. This reform inevitably was cast in terms of absolute good or its absence. Morality of this type narrowed rather than broadened toleration for non-conformity and deviance within the southern community. Further, as Nichols suggests, the individualism justified by such a morality quickly degenerated to an extreme form of social Darwinism supportive of the existing class structure.[32]

Like the Northeast, the early frontier experience in the Southeast tempered the value and belief in traditional authority, conservative morality and "rugged individualism," with a particular appreciation for the pragmatically rational solution to the demands of frontier life. The notion of equality, also, emerged from the rigors and isolation of early backwoods existence. The early strength of these changes was, in fact, the basis for the egalitarianism in American society associated with the "Jacksonian movement" of the early 19th century. Such a movement reflected the incipient growth of what was to be the populist movement later in the century. Ultimately, however, the conservative strength of the region's tradition was successful in containing the growth of populism in the Southeast by interpreting its impact as a threat to the "civilized authority" of the existing institutions.[33] That this same device was far less successful in other frontier regions at that time speaks both to the greater strength of traditional forces in the southeastern region and to their relative weakness in other frontier regions of the time.

The social and economic factors leading to the Civil War and the subsequent Reconstruction period have been thoroughly explored elsewhere. Their relevance for our discussion of sociocultural regions rests upon the values and beliefs influenced by those events. "Progress," to the extent that it was identified with northern imposed social change, abolition, and reconstruction efforts, became the antithesis of the southern tradition in the southeasterner's eyes.[34] What little industry that was developed in the South following the Civil War was rapidly co-opted into sharing the sociocultural traditions held by the aristocracy of the region.[35] Progress, never a strongly held belief in the area, became increasingly construed in terms of the material exploitation of the masses (generally Negro) by the few (generally white). Thus, progress as defined in the Northeast was impeded by the maintenance of a mythology of the supremacy of the southern life style.

In maintaining what essentially was an agrarian belief and value system in the face of industrial change elsewhere in American society, the Southeast had to de-emphasize the pragmatic rationality originally nurtured in the frontier areas of the region, while increasingly emphasizing the desirable qualities of southern morality, particularly as expressed by the ante-bellum South. The pattern of individual violence and physical solutions to community problems already associated with the region in de Tocqueville's time,[36] continued to be supported as part of the cultural heritage of southern society.[37] So, also, the early belief in and value placed upon egalitarianism became subverted by the racist's fears generated by the southern power structure.[38]

Yet another aspect of southeastern historical development of importance to an understanding of its belief and value system is its migration patterns (both in terms of immigration and emmigration). While it would be incorrect to argue that the Southeast has received no foreign immigrants since revolutionary times, it is accurate historically to note that compared to the Northeast, the Southeastern states received disproportionately few immigrants who landed in America during the 19th century. One consequence of this was the ability of the Southeast to maintain a fairly endogamous belief and value system in the face of little competition. Compounding this relatively isolated immigration status was the high soil fertility of the region which reduced manpower needs in agriculture, leading to the large emmigration of primarily unskilled workers to other regions of the country. These two patterns (low immigration and high regional emmigration of labor surplus) has, until very recently, permitted the traditional southeastern ideology and values to go relatively unchallenged.[39]

The contemporary southeastern region is, then, a region wherein the dominant beliefs and values center upon a traditional morality generally resistant to the requirements of modern industrial life. While desirous of the material well being associated with industrial technology, the introduction of technical innovations is frequently seen within the region as a threat to traditional life styles. To an extent not shared by its neighboring region to the North, the Southeast has tended to romanticize its past at the expense of progress and the pragmatic rationality associated with changes in social organization needed to bring about modernization. Having little history of dissent, turning in upon itself following defeat, clinging to an agricultural past, and faced with the dilemma of a large unwanted racial minority, the Southeast has apparently only recently begun to break out of its ideological constraints. Its ideology is conservative and traditional, while its values are predominantly those associated with a pre-industrial society.[40]

The Great Lakes. This region, frequently referred to as the "most typically American" region in America, is in many respects a merging of the ideologies of the Northeast and Southeast. Like the Northeast, progress, hard work and material success are emphasized. On the other hand, the morality and insularity of this region is similar in many respects to that of the South. Populated by both regions, as well as by large numbers of immigrants during the early and middle 19th century, favored by both agricultural and industrial potential, the Great Lakes region has been marked by an emphasis upon egalitarianism which has found its expression in both material achievement and tendencies toward isolationist's philosophies in societal relations. The political conservatism of this region tends not to be the conservatism of tradition, however, but that of material success.[41]

Although this region has several large metropolitan areas located within it, it lacks the more urbane characterstics of the Northeast. Its ideology, in many respects, is best typified in the various community studies that point to beliefs and values highly moralistic and committed to the "American way," which tends to be interpreted in terms of equality, individual effort, and material reward.[42] Not particularly tolerant of social and philosophical deviation, it nonetheless has been marked in its history by a great deal of economic and political diversity.[43]

Thus, the ideology and values of the Great Lakes region center upon material success, equality and morality. The region's position relative to other regions on the modernization index points to its commitment to progress, tempered by a somewhat irrational enthocentrism and its dependence upon the Northeast as the financial and cultural center of the society.

The Plains. This region of the United States is not generally treated separately in regional studies. The northern section is usually included with the Great Lakes region (and labeled Midwest), while the southern section is generally associated with the Southeast (and labeled South). Yet, both in terms of the states' modernization scores and in terms of the ecological and economic characterstics of this region, there is a great deal of homogeneity. The economy of these states is predominantly agricultural; their climate uniformly harsh; and their history (with the exception of Texas) relatively brief.[44]

Climate and resources have played a highly significant role in the development of the regional subculture of the Plains. Arid or semiarid climatic conditions have restricted the kind of agricultural development possible in this region to primarily grain crops in the northern area, and to cotton, grain, sheep and cattle in the southern area. Such products have been highly amenable to technological improvements in farming, but not particularly conducive to the growth of large urban centers. Accordingly, as the modernization index suggests, the Plains has been a region marked by a strong agrarian flavor. Such a cultural disposition has been reflected in the pragmatic conservatism of this region's politics and social life. Subscribing to the essentially 19th century ideology of individualism and hard work, the Plains culture has been quick to adapt technological innovation to agricultural and mineral exploitation but reluctant to extend that adaptive tendency to other areas of social life. This somewhat narrow view of "progress" has, to some extent, led to a depopulation of much of the Plains area as technological improvements have forced the marginal farmer off the land, but offered him little in the way of occupational alternatives within the region. Only in Texas, which has benefited from great mineral advantages, has this pattern deviated to any extent.[45]

The Plains area as "the last frontier" is a region characterized by the pragmatism of rural life, highly optimistic in a narrow material and technological sense, priding itself on an external conformity in its belief in individualism as "the American way." It is, in short, a reflection of a way of life consistent with the ideological and value elements associated with the "frontier spirit" of 19th century America. The belief in equality, strongly reflected in the Great Lakes region, exists here also, but it is more a belief in the equality for one to achieve in the economic sense if he is able, as opposed to the broader social and political equality of the Great Lakes (laissez faire equality versus social equality).[46]

The West. For many Americans, the West is as close to the promised land as is available; a land of opportunity, scenery, sunshine, and wealth. It is a region strongly committed to a belief in, and valuation of, progress. Favored by bountiful natural resources, a relatively sparse population, and scenic grandeur, it has witnessed tremendous development during the current century.[47] While individualism is strong in this region, it is an individualism tempered by the need for cooperative efforts in overcoming the economic and technical problems presented by the vastness of the region.[48]

As might be anticipated from the high level of modernity manifested by this region on the modernization index, its configuration of ideology and values is similar to that associated with the Northeast. Differences in large measure seem attributable to the historical precedent of the Northeast and the ecological features of the two regions. Having developed an early lead in the industrial and commercial growth of the society, the Northeast has a greater commitment to the values and beliefs associated with the morality of work and achievement than does the West. So, also, the vast expanse and great natural wealth of the West has encouraged the perpetuation of economic individualism, long since weakened in the Northeast by the limitations of a less bountiful environment. External conformity too varies between the regions, consistent with the maintenance of western individualism. While the rapid growth of large scale industrial organization has led to the same needs for external conformity in the West, it is a conformity more restricted to occupational life than in the Northeast, thus allowing for a comparatively greater expression of individuality.[49]

Regional Context and the School

The underlying assumption of the previous discussion (documented in Chapter Two) has been that modernization consists of at least two components; technical and organizational changes on the one hand, and ideological and value changes on the other. The thesis of regional variation in ideology and values within American society has been quite simply that ideology and values consistent with objective measures of modernization are more likely to be found in the more modern sociocultural regions of American society than in the less modern sociocultural regions. In the following paragraphs we turn briefly to an examination of the manner in which this variation in ideology and values is reflected in variations in educational phenomenon.

Research evidence on regional variations in education, particularly as it applies to the school, is limited but consistent. In terms of inputs to education, regional variation in enrollment rates,[50] teacher-pupil ratio,[51] and per pupil expenditure[52] has been shown. So, also, in terms of output, regional variation in educational attainment,[53] college enrollment,[54] professional and scientific productivity,[55] have also been demonstrated. With a few exceptions (noticeably in the Plains area) these studies point to the positive association between the modernity of a region and the inputs and outputs of its educational system. This pattern of increased inputs and outputs in the more modern regions is particularly apparent when the Northeast, as the most modern region, is compared to the Southeast as the least modern region.

Evidence on the nature of educational organization variation between regions, however, is less readily available. Cartter, in an analysis of southern higher education, argues that the South tends to overvalue ". . . the social aspects of higher education . . . and has undervalued the intellectual and economic benefits."[56] Indirect documentation for this contention is available from Ryans' study of teacher characteristics. Southern teachers scored the lowest on verbal understanding and held the most traditional educational perspectives.[57] The analysis presented in Chapter Two of this report also suggests the positive association between modernization and organizational complexity across various regions. Elsewhere, Nicholls argues that the South has historically been antagonistic toward public education generally, and intellectual freedom and inquiry specifically.[58]

Summary

After identifying varying classical and contemporary definitions of American regions, this chapter has linked systematically the concepts of region and modernization. Building on the work of Odum and Moore, five regions of contemporary importance have been identified and distinguished in terms of their level of modernity as measured by the composite modernization index developed in Chapter Two. The Northeast was shown to be the most modern of these five American regions, followed by the Far West, Great Lakes, Plains, and the Southeast.

Systematic research evidence on the differences in ideology and values generally assumed to underlie the more overt manifestations of the modernization process is generally unavailable. However, distinctions among the five regions in their prevailing orientations toward "progress," material reward, pragmatic rationality, and conformity have been made and documented. Considerable evidence has also been cited to support our general expectation that educational phenomena also vary with the regional contexts of contemporary America.

These appraisals, while indicative of the basis for our anticipating regional variations in the organizational structure and functioning of the American public school, are little more than suggestive of what may be observed if our theoretical assumptions regarding the school as an open social system are correct. In Chapter Eight we will return to this issue and suggest some rather pervasive differences among educational organizations which are likely to be the result of their different regional contexts.

Notes and References (5)

1. For several variations on this theme of "Mass Society or Mass Culture," see Robert Nisbet, The Quest for Community (New York: Oxford University Press, 1953); William Kornhauser, The Politics of Mass Society (Glencoe, Illinois: The Free Press, 1959); Daniel Bell, The End of Ideology (New York: Collier Books, 1961); and Max Lerner, America as a Civilization (New York: Simon and Schuster, 1957).

2. Indeed, a recent analysis by Glenn of various surveys on regional behavior and attitudes over time suggests that north-south regional differences have not decreased, and may have increased. See Norval D. Glenn, "Massification versus Differentiation: Some Trend Data From National Surveys," Social Forces, 46 (1967), pp. 172-180.

3. One of the earliest reported observations on regional differences are those of de Tocqueville. See Alexis de Tocqueville, Journey to America, translated by George Laurence (New Haven, Connecticut: Yale University Press, 1960). Other historical references include, Sir Augustus John Foster, Jeffersonian America, edited by Richard Beale Davis (San Marino, California: The Huntingdon Library, 1954); and J. Hector St. John Crevecoeur, Letters from an American Farmer (New York: Fox, Duffield and Co., 1904).

4. Some of the many studies in which region is shown to influence directly or indirectly formal education include, C. Arnold Anderson and Mary Jean Bowman, "Education Distributions and Attainment Norms in the United States," Proceedings: World Population Conference, 1954 (New York: United Nations Publication, 1955), pp. 931-942; Mary Jean Bowman, "Human Inequalities and Southern Underdevelopment," The Southern Economic Journal, 32, No. 1, Part 2 (1965), pp. 73-102; Charles C. Cole, Jr., Encouraging Scientific Talent (New York: College Entrance Examination Board, 1956); Rashi Fein, "Educational Patterns in Southern Migration," The Southern Economic Journal, 32 (1965), pp. 106-124; C. Horace Hamilton, "Educational Selectivity of Net Migration from the South," Social Forces, 38 (1959), pp. 33-42; Allan M. Cartter, "Qualitative Aspects of Southern University Education," The Southern Economic Journal, 32 (1965), No. 1, Part 2, pp. 39-69; Elizabeth M. Suval and C. Horace Hamilton, "Some New Evidence on Educational Selectivity in Migration to and From the South," Social Forces, 43 (1965), pp. 536-547; and William R. Taylor, "Toward a Definition of Orthodoxy," Harvard Educational Review, 36 (1966), pp. 412-426.

5. Writing in 1938, Odum and Moore report 28 varying definitions for regions. See Howard Odum and Harry E. Moore, *American Regionalism* (New York: Henry Holt and Co., 1938), pp. 2-34.

6. *Ibid*., pp. 438-439.

7. *Ibid*., p. 433.

8. *Ibid*., p. 436.

9. Rupert B. Vance, "The Regional Concept as a Tool for Social Research," in *Regionalism in America*, edited by Merrill Jensen (Madison, Wisconsin: University of Wisconsin Press, 1951), p. 124.

10. Louis Wirth, "The Limitations of Regionalism," *Regionalism in America*, edited by Merrill Jensen, *Ibid*., pp. 381-393.

11. One of the best summaries of such variations among census regions is found in the work of Harvey S. Perloff, *et al*., *Regions, Resources, and Economic Growth* (Baltimore: The Johns Hopkins Press, 1960).

12. Some relevant studies on various regional differences directly or indirectly supportive of regional variation in ideology and values include: Irving Crespi, "The Structural Basis for Right-Wing Conservatism: The Goldwater Case," *Public Opinion Quarterly*, 29 (1965-66), pp. 523-543; Glenn, *op. cit*.; Norval D. Glenn and J. L. Simmons, "Are Regional Cultural Differences Diminishing," *Public Opinion Quarterly*, 31 (1967), pp. 176-193; David Gottlieb, "Regional Differences as a Variable in Sociological Research," *Social Problems*, 10 (1963), pp. 251-256; Rose K. Goldson, *et al*., *What College Students Think* (Princeton, New Jersey: D. Van Nostrand Co., Inc., 1960); Duncan MacRae, Jr., *Dimensions of Congressional Voting* (Berkeley, California: University of California Press, 1958), pp. 256-280; and Allen J. Williams, Jr., "Regional Differences in Authoritarianism," *Social Forces*, 45 (1966), pp. 273-277.

13. Alexis de Tocqueville, *Democracy in America*, edited by J. P. Mayer and Max Lerner (New York: Harper and Row, 1966).

14. D. W. Brogan, *America in the Modern World* (New Brunswick, New Jersey: Rutgers University Press, 1960).

15. Carleton Beals, *Our Yankee Heritage: New England's Contribution to American Civilization* (New York: David McKay Co., 1955).

16. Frederick Jackson Turner, *The Frontier in American History* (New York: Holt and Co., 1921).

17. H. Richard Niebuhr, *The Social Sources of Denominationalism*, Meridian Edition (Cleveland: The World Publishing Co., 1957).

18. Conrad M. Arensberg, "American Communities," *American Anthropologist*, 57 (1955), pp. 1143-1162.

19. Ibid., p. 1153.

20. For interesting discussions of the role of beliefs and values associated with social development in various societies, see S. N. Eisenstadt, Modernization: Protest and Change (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1966); Wilbert E. Moore, The Impact of Industry (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965); and Joel M. Halpern, The Changing Village Community (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967).

21. Frederick Jackson Turner, op. cit.; Daniel J. Boorstin, The Americans: The Colonial Experience (New York: Random House, 1958), Parts One and Two.

22. de Tocqueville, Journey to America, op. cit.; Brogen, op. cit.

23. In his comparative and historical analysis of American society, Lipset observes that "uniformity and conformity" have been attributed to Americans as a national characteristic since pre-civil war days. See Seymour Martin Lipset, The First New Nation: The United States in Historical and Comparative Perspective (New York: Basic Books, Inc., 1963), p. 106; see also Arensberg, op. cit.

24. Carle C. Zimmerman and Richard E. DuWors, Graphic Regional Sociology (Cambridge, Massachusetts: The Phillips Book Store, 1952), pp. 54-55.

25. Ibid., pp. 55-57.

26. This secularization process for American society in general is systematically analyzed by Herberg. See Will Herberg, Protestant, Catholic, Jew, Revised Edition (Garden City, New York: Doubleday and Co., Inc., 1960), particularly Chapter VI.

27. Clyde Kluckhohn, "Have There Been Discernible Shifts in American Values during the Past Generation?" in The American Style, edited by Elting E. Morrison (New York: Harper and Bros., 1958), pp. 145-219.

28. Georgia was a partial exception to this generalization. But even in that case, the trustees anticipated the colony would ultimately grow into an economically profitable enterprise. See Roger Burlingame, The American Conscience (New York: Alfred A. Knopf, 1957), Chapter 7; and Boorstin, op. cit., Parts 3 and 4.

29. Burlingame, Ibid., pp. 140-142; Zimmerman and DuWors, op. cit., p. 28.

30. Boorstin, op. cit., pp. 109-111.

31. Ibid.

32. William H. Nichols, Southern Tradition and Regional Progress (Chapel Hill, North Carolina: University of North Carolina Press, 1960), pp. 64-65, and p. 104.

33. Ibid., pp. 82-86.

34. Ibid., p. 79.

35. Ibid., pp. 43-52.

36. de Tocqueville, Journey to America, op. cit., pp. 106-110.

37. Nicholls, op. cit., pp. 134-140.

38. Ibid., pp. 73-92.

39. Ibid., pp. 18-21.

40. Ibid., Chapter 2.

41. Odum and Moore, op. cit., pp. 462-481; John Gillin, "National and Regional Cultural Values in the United States," Social Forces, 34 (1955), pp. 107-113.

42. Ibid.

43. Wisconsin was one of the few states in history to successfully develop a Progressive Party outside of the boundaries of the major political parties in American society. Also, a great measure of support for early populist movements was garnered in this region.

44. Odum and Moore, op. cit., pp. 576-617; Perloff, et al., op. cit.

45. Texas, as Odum and Moore have observed, is a dominant force in the southern segment of the Plains region. However, because of its size, history and wealth, it is in many ways least "typical" of the Plains region.

46. Gillin, op. cit., pp. 112-113.

47. Perloff, et al., op. cit.

48. Odum and Moore, op. cit., pp. 550-571. Indirect corroboration for this observation on the strength of individualism in this region is evidenced by the relatively high level of support Goldwater was able to gain in the 1964 presidential election in the West. See Irving Crespi, op. cit. Its temperance, however, is suggested by Congressional voting records where western representatives are more responsive to Federal legislation consistent with controlled development. See MacRae, op. cit.

49. Gillin, op. cit., p. 113; Zimmerman and DuWors, op. cit., pp. 122-129. The somewhat amphorous position of the Far West in terms of value and belief characteristics is attributable in part to the large number of newcomers from other regions. The contemporary fluctuations in political and social behavior in the Far West suggests that many of these groups are not totally assimilated into a coherent regional orientation.

50. John K. Folger and Charles B. Nam, Education of the American Population (Washington, D. C.: U. S. Government Printing Office, 1967), p. 21.

51. *Ibid*., p. 92.

52. U. S. Bureau of the Census, *Statistical Abstract of the United States: 1963* (Washington, D. C.: U. S. Government Printing Office, 1963), Tables 19 and 144.

53. Folger and Nam, *op*. *cit*., pp. 152-155.

54. Cole, *op*. *cit*., p. 64.

55. *Ibid*., pp. 14-18.

56. Cartter, *op*. *cit*., p. 40.

57. David Ryans, *Characteristics of Teachers* (Washington, D. C.: American Council on Education, 1960), p. 397.

58. Nicholls, *op*. *cit*., pp. 106-153.

Chapter Six. Metropolitanizational Variations in American Society

The preceding chapter was concerned primarily with identifying different regions of American society and examining important sociocultural differences among them which can be related to the modernization process. These differences are expected to have implications for the nature of the school as a social organization. In this chapter we consider a different aspect of the sociocultural context which can also affect the school as a social organization--the degree of metropolitanization. Like region, community life can also be viewed as varying in terms of the modernity of its sociocultural life. The basic assumption of this discussion is that the process of metropolitanization is associated with the modernization of the larger society. Metropolitan life is, in other words, the community life form seen as most consistent with a modern society.

Throughout this report we use the concept of metropolitanization to refer to the process by which some of a society's membership comes increasingly to reflect ecological, social and cultural characteristics associated with urban life _in_ _modern_ _societies_. Although to be consistent with historical usage we discuss "rural-urban" differences in the succeeding paragraphs of this chapter, a metropolitan community is more than simply urban, for it represents a special configuration of life styles not found in the pre-industrial urban cities of history. Further, it is fairly evident that "rural" in contemporary American life is not the classical peasant community of pre-industrial societies. The discussion, therefore, although generally cast in traditional rural-urban terminology, refers to a broader sociocultural phenomenon: how social settings of varying degrees of metropolitanization reflect different degrees of modernity.

Fundamental Differences between Rural and Urban Communities

The meanings of "rural" and "urban" in American society are far from clear, particularly with the rapid pace of modernization. Bealer, Willits, and Kuvlesky have identified three components of meaning associated with rural which underlie past research efforts--the ecological (rurality determined by population size, density, and urban proximity), the occupational (the proportion of a population engaged in agriculture), and the sociocultural (particular social and cultural characteristics).[1] While it is true that the three components need not reflect the same phenomenon in a particular society,[2] it is also true that they are generally associated. Accordingly, while there is analytical utility in keeping the three components of rurality separate, the realities of research often necessitate their combination in some form. Although our primary concern is with the sociocultural distinctions between rural and urban communities, ecological and occupational distinctions must of necessity also be considered.

Rurality and urbanness are traditionally associated with the concept of "community." This concept also has several meanings,[3] but it is most commonly defined in terms of territory, social ties, and group identity.[4] Further, as

Sjoberg has noted, "in order to analyze rural-urban effectively, one must recognize that rural and urban communities are subsystems within larger wholes such as nation-state systems. Neither the local urban community nor its rural counterpart are microscopic representations of the broader society."[5]

Sjoberg notes further that the concepts of rural and urban are primarily analytic constructs employed in the study of aspects of social systems. He warns that "we must not confuse an analytical distinction with empirical reality, for obviously a gradation exists from the relatively small, isolated village, through the larger village, to the market town, the largest city, and finally to the dominant community (or communities)."[6]

A rural community, ideal-typically, is characterized as a community of small population and low population density, sufficiently removed from the closest urban area to be considered organizationally autonomous, whose male population is predominantly engaged in agricultural pursuits or in occupations directly supportive of agriculture, with a total population who identify themselves as members of that community, with the solidarity (or unity) of the community based upon a high consensus of the membership as to appropriate ideology and values. In contrast, an urban community is ideal-typically characterized as a community of large population and high population density, organizationally autonomous from other urban communities, whose male population is predominantly engaged in commercial or industrial pursuits, with a total population who identify themselves as members of that community, and with the solidarity (or unity) of the community based primarily upon the division of labor.

The underlying ecological and occupational differences between rural and urban communities are apparent in the above characterizations. A word is necessary about the sociocultural differences, however, for the essence of our interest in differences between rural and urban communities is in the manner in which their sociocultural environments vary. In the case of the rural community, as Toennies, Weber and others have shown, it is the shared sentiment, based upon similar ideology and values, which leads to the traditionalism of the rural community, i.e., support of existing norms based upon their being handed down from a past considered sacred.[7] Such emphasis upon traditionalism is supportive of the particularistic, diffuse, and ascriptive nature of rural community relationships, wherein family and friendship frequently determine behavior and influence patterns in community action. In contrast, within the urban community the cohesion of the sociocultural context is manifest in the division of labor and rests upon what Becker has referred to as "pursuent rationality,"[8] i.e., a recognition of the need for cohesion and cooperation in order to attain individual ends. Such cohesion is maintained by universalistic, specific, and achievement norms associated with social relationships required in complex commercial and industrial life, and is functional in a modern society.

The preceding characterizations must, of course, be seen within the larger context of American society. It seems apparent that while, in the final analysis, differences among communities rest upon ecological and occupational variation associated with the technological level of American society, the basis for the sociocultural differences in rural and urban communities noted above rests primarily upon the different roles played by ideology and values per se. Although in the preceding chapter on regional variations distinctions in ideology and values were seen as mainly distinctions of emphasis between regions, the differences in ideology and values between rural and urban communities can be seen in terms of the role they play in the maintenance of community cohesion. Socioculturally, in contemporary American society, the main basis for the "traditionalistic"[9] posture associated with the rural community is seen to be the "sacred" role ascribed to values and beliefs seen by members of the community as important for community life. These same values and beliefs are generally held by members of the urban community, but in much more of a "secular" fashion, and, therefore, tend to be less associated with the basic integrity of the community itself.[10]

The Rural-Urban Continuum

Variations between rural and urban life have been the focus of social scientists for many years. Early efforts to distinguish social and cultural differences relied upon dichotomous models, categorical in nature. Thus, we have Toennies' Gemeinshaft and Gesellschaft,[11] Durkheim's organic and mechanical solidarity,[12] Redfield's folk and urban,[13] and Becker's sacred and secular.[14] While these scholars vary in their specific focus, their general concern has been to conceptualize the apparent differences between agricultural and industrial societies in social relationships, ideology, and value orientation. Their intent, as Sjoberg has observed, was to understand ". . . what happens (and why) when a social order is transformed from one wherein most people reside in small villages and are committed to working the land from dawn to dusk, to one where the vast majority of inhabitants are urban-based and committed to the furtherance of a scientific-industrial way of life. . ."[15] Recent efforts to bring the classical distinctions closer to social reality have lead to the further development of the concept of the "rural-urban continuum."[16] However, many criticisms have been leveled at this construct, particularly on the intrasocietal level.[17] In the main, such concerns center around the construct's meaning, its cultural relativeness, its importance in a modern society, and its measurement.[18] In the following discussion we attempt to anticipate such concerns prior to developing our own view of the importance of metropolitanizational area as a sociocultural context of the school in American society.

Early empirical efforts to characterize communities at different points along this gradient made use of multiple criteria which generally were qualitative in nature.[19] Later emphasis was on a limited number of quantitative criteria (often simply the number of inhabitants within a political boundry).[20] However, recent efforts at the operationalization of the rural-urban continuum have again become multivariate and have attempted to provide systematic distinctions between different types of communities based upon many simultaneous quantitative measures.[21]

A major impetus for this movement toward multivariate quantitative characterization of communities has been the efforts since World War II of sociologists associated with the federal government to standardize terminology and to provide systematic measurement procedures that take into account the social realities of communities as well as their population size and density. Given the general concern of this chapter with the characterization of communities representing differing degrees of modernity, we find particularly attractive the distinctions made by the U. S. Bureau of the Budget with respect to Standard Metropolitan Statistical Areas (SMSAs). The definition of an SMSA involves two major considerations: the existence of a community (or communities) of minimum population (typically 50,000 inhabitants), and the economic and social relationships between that community and contiguous areas which are metropolitan in character.[22] Typically, distinctions in type of community are made between SMSA and non-SMSA locations, but distinctions can also be made between that portion of an SMSA which is located in the "central city" and that portion which is in the "ring" around the central city. A representation of the United States in 1960 in terms of SMSA-central city, SMSA-ring, and non-SMSA locations is presented in Figure 6-1. Such a tripartite distinction seems to us to capture better than any other standardized community indicator, for which nationwide data are available, the essence of modernization differences along the rural-urban continuum--with the central city (on the average) being most modern in its sociocultural characteristics, the ring being less modern, and the non-SMSA locations being the least modern. This is not to suggest, of course, that such a distinction is necessarily the most ideal. Rather, it is the most representative which we have been able to identify for characterizing the differential effects of modernization by type of community.

However, throughout the remainder of this chapter we must fall back on less specific terminology in examining fundamental differences among communities, for past research has seldom made a distinction among SMSA categories. Therefore, the characterizations of rural and urban communities to be set forth below are merely "ideal-types" perceived by us to be at different (but vaguely defined) points along a rural-urban continuum. Nevertheless, even though for heuristic reasons we speak of categorical distinctions between "rural" and "urban" communities, we are still subscribing to what Duncan has referred to as the "weak form" of the continuum hypothesis, i.e., that "there is no unique sharp breaking point between rural and urban."[23] In addition, we wish to reemphasize the necessity of acknowledging that both rural and urban communities are subsystems of the larger social system. These points will be particularly important when later we turn to consider the effects of the level of modernization rendered by a community upon the schools as social organizations.

Most students of the rural-urban continuum agree that in American society rural-urban differences of the type just noted have been lessening.[24] Yet, there is ample evidence to suggest that significant sociocultural differences still exist--differences that could influence the organizational structure and functioning of the school.[25] We turn, therefore, to a brief summary of selected research on such differences in areas of community life, interpersonal relations, the family, socialization, attitudes, and values.

Community Life. Larson and Rogers, in a broad review of relevant literature, report that rural communities are becoming linked to the larger society through the increasing number of farmers who work in non-farm occupations to supplement their income, a trend to "agribusiness" and contract farming, the integration of rural communities into centralized organizations, and the increased rural-urban interaction.[26] These social linkages are important, of

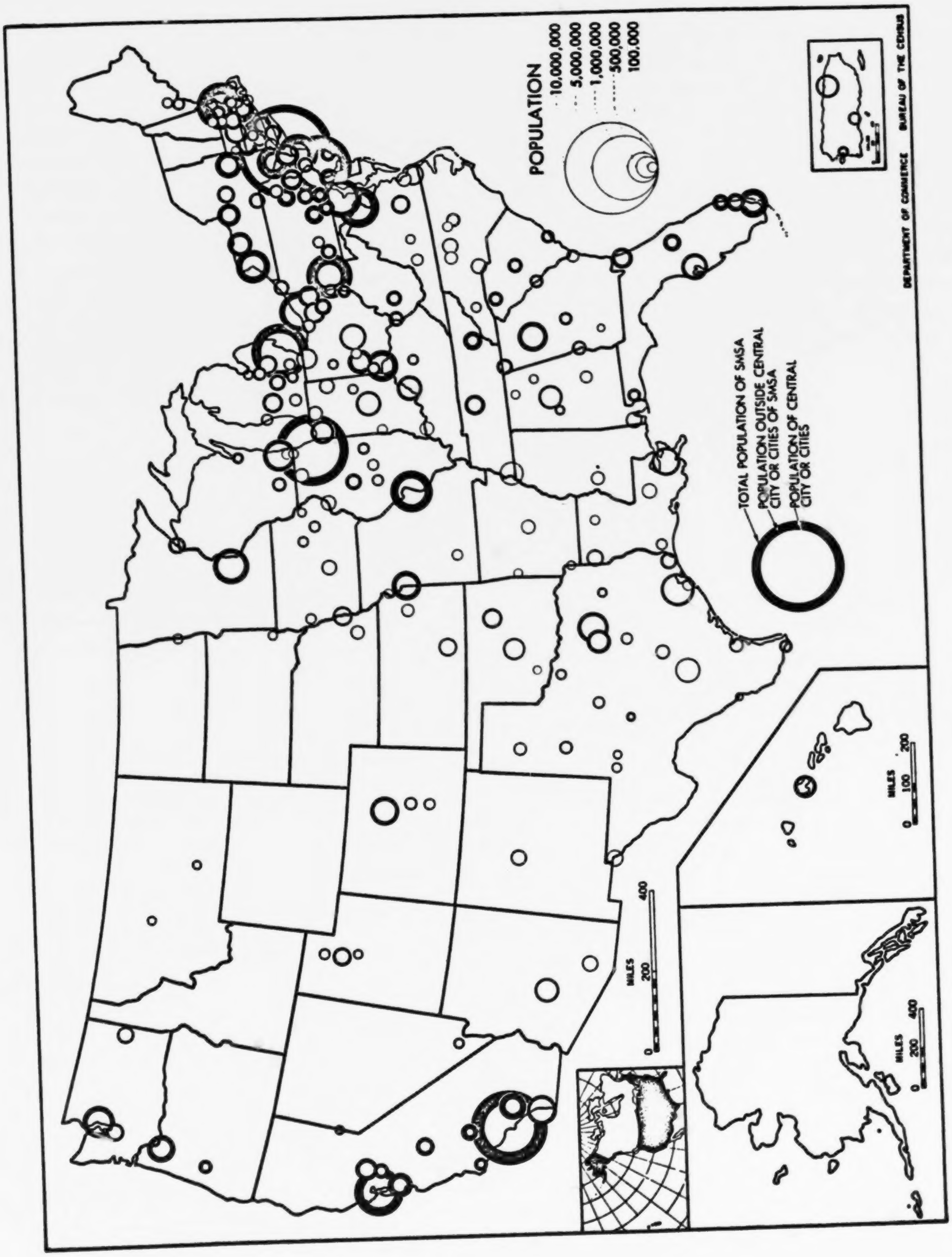

POPULATION
10,000,000
5,000,000
1,000,000
500,000
100,000
TOTAL POPULATION OF SMSA
POPULATION OUTSIDE CENTRAL CITY OR CITIES OF SMSA
POPULATION OF CENTRAL CITY OR CITIES
MILES
0
200
400
MILES
0
100
200
MILES
0
200
400
DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

Figure 6-1. Population of Standard Metropolitan Statistical Areas: 1960

course, in reducing sociocultural differences. However, community studies, such as the work of Vidich and Bensman, suggest that the small rural community to some extent subverts the rationality of urban based organizations in order to maintain the particularistic and ascriptive solidarity of rural life.[27] Furthermore, as Schnore observes, rural and urban communities still vary along a wide spectrum of demographic, social, economic, and residential characteristics.[28]

Interpersonal Relations. Historically, rural and urban life styles have been seen as varying in several ways. The pattern of interpersonal relations in each setting has been a critical part of this distinction. Generally, interpersonal behavior in rural settings has been found to emphasize primary relationships consistent with the particularistic, diffuse, and ascriptive qualities of rural life mentioned earlier. In contrast, interpersonal relations in urban settings are found to emphasize secondary relationships in keeping with universalistic, specific, and achievement orientations in modern life. However, research on the subject is not always consistent in supporting this distinction regarding American society.[29] Some evidence points to a reduction of rural group solidarity, particularly in the urban fringe areas. In essentially rural areas, informal contacts appear to be increasing, while in some cases small primary groups are assuming less importance, to be replaced by the village as the "social and institutional center of rural life."[30]

Family Relations and Socialization Patterns. The family as an integral unity of any community has also been found to vary between rural and urban settings. As Burchinal has noted, "a considerable body of data points to the . . . conclusion that there are significant differences in the socialization experiences of rural and urban youth."[31] Such differences in socialization experiences suggest, of course, that familial patterns are different as well. Thus, it is not surprising to find rural-urban differences in the household division of labor, with farm women fulfilling a higher proportion of household tasks as well as helping the husband in his familial role.[32] While the results are not always consistent, Burchinal suggests that farm living produces less marital and personal satisfaction than non-farm living.[33] In spite of such differences, however, the frequency of divorce is much higher in urban areas.[34]

Other socialization differences directly associated with rural and urban experiences include a lower level of child satisfaction with parental-child relationships in non-urban homes,[35] less parental encouragement of children for advanced education in non-urban homes,[36] and less involvement in the occupational planning of adolescent boys by non-urban parents.[37] While it should be mentioned again that in many ways there is indication of a tendency toward convergence in the attitudes and behavior of rural and urban families, it is also necessary to state that such differences between rural and urban families are still quite noticeable.

Ideology and Values. Differences in patterns of social behavior such as those noted above may be clarified in some measure by research pointing to differences in ideology and values dominant in rural or urban settings. Beers, for example, found in an analysis of several public opinion polls conducted between 1946 and 1950 that farmers (relative to other groups in American society) were generally more opposed to government welfare and control measures, to labor unions and pro-union issues, to social legislation, to Negro occupational equality, while being more in favor of universal military training and the "control of communism" in American society.[38] Farmers also indicate less support for college training and more satisfaction with their "lot in life." However, they do not appear to differ generally from the rest of the population on international issues and occupational preferences. Beers also suggests that such differences as he found indicate a greater degree of conservatism, traditionalism, and puritan morality among farmers than among non-farmers. Some measure of additional support for these tentative findings is offered by the results of a study of religious beliefs and practices of farm and non-farm families which indicates that farm reared college students are raised in a more religiously conservative environment.[39]

There have also been some comparative studies of rural and urban youth. Willits and Bealer report rural high school students to be more socially conservative than town or village high school students, although they suggest the difference may not be prominent enough for "rurality" to serve as an indicator of levels of conservatism.[40] Strauss reports that farm boys, although having greater responsibility in work roles than non-farm boys, have less opportunity to develop financial responsibility.[41] A subsequent study by Straus and Sudia indicated that farm boys had a lower "entreprenurial orientation" and business knowledge than urban boys.[42] Further support for this finding is available from Haller and Wolff who report that "urban boys tend to score higher on personality measures presumably related to performance in urban work situations."[43] Thus, while it is essential to note that rural-urban differences in American society are probably in the process of reduction, the distinctions suggested in the beginning of this chapter continue to constitute a meaningful basis for differentiating social environments in contemporary American society.

Metropolitanizational Context and the School

Some idea as to the effect of these differing metropolitanizational environments upon educational organizations can be inferred from research findings regarding differences between rural and urban schooling, performance, and educational attitudes and values. Rural schools have been found to be smaller than urban schools, in terms of both the number of pupils and the number of teachers per school.[44] Not only are rural schools smaller on the average than urban schools, but they offer less service to the community in terms of kindergartens, summer school programs, and adult education programs.[45] While there is little available evidence to suggest that rural and urban schools differ appreciably in the average age of teachers or the proportion of teachers who are female,[46] rural teachers apparently are more mobile between educational systems than are urban teachers.[47] In addition, rural teachers are more likely to teach several grades and subjects than are urban teachers. Finally, the proportion of rural teachers with less than a college degree or without full certification is much greater than among urban teachers.[48]

With these rather critical differences in the educational system of rural and urban areas, it is not surprising that appreciable differences exist in the educational performance of rural and urban youth. Since the fewest kindergartens are in the rural areas, it is understandable that the proportion of five year olds in elementary or kindergarten ranges from 57 percent in the urban central city to 24 percent among farm families.[49] In addition, school retardation is highest among the rural non-farm population and lowest in the urban fringe.[50] This unfavorable position of rural youth is maintained both in terms of dropouts and in terms of proportion of high school graduates who enter college.[51] More rural children are generally found to drop out of school and fewer high school graduates go on to college than their urban counterparts. Such differences are reflected in the proportion of young adults who graduate from high school. In 1960, 64 percent of the urban young adult population but only 55 percent of the rural young adult population, were high school graduates.[52]

Part of these differences, of course, can be attributed to economic factors. Rural school teachers, for example, are paid appreciably less than are urban teachers.[53] On the other hand, there would appear to be general agreement from many studies that rural farm youth lack educational and occupational aspirations as high as those held by urban youth.[54] While differences are not as clear cut for rural non-farm youth, considerable evidence suggests they fall in an intermediate position on aspirations between rural farm youth and urban youth.[55] This difference in aspirations at the high school level may explain in part the fact the rural farm youth are less likely to have definite college plans than rural non-farm or urban youth,[56] or to perform as well academically at the college level.[57] Another factor influencing differences in academic performance is suggested by the finding that rural college students have been observed to be more vocationally oriented than urban students[58] and to be more traditional in their educational values.[59]

Summary

In this chapter we have attempted an explication of the concept of metropolitanization by reference to differences among communities at different levels of modernization. Although for illustrative purposes we have contrasted "rural" and "urban" communities as ideal types, it has been our position that a continuum exists along which communities of different levels of modernization can be identified. Three major areal categories identified by the U. S. Bureau of the Budget were noted and related to the concept of modernization. It was our assumption that the central cities of SMSAs are the most modern of the three categories, followed by the rings of SMSAs, and then by the non-SMSA settings.

Fundamental differences were noted between ideal-typical communities along the rural-urban continuum in terms of the role of ideology and values in the maintenance of community cohesion. Differences between different metropolitanizational contexts in social attitudes and behavior and in school related phenomena were then examined. As in the case of our discussion of regional differences, these results are merely suggestive of differences in the organizational structure and functioning of schools in different metropolitanizational contexts which should obtain if our view of the school as an open social system presented in Chapter Four is correct. In Chapter Eight we will return to this issue and suggest some rather pervasive differences among educational organizations which are likely to be the result of their different metropolitanizational contexts.

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Chapter Seven. Social Class Variations in American Society

In Chapters Five and Six we addressed ourselves to the transitional nature of modernization, discussed regional and metropolitanizational variations in the sociocultural context of American society, and considered the general effects of such variation upon ideology and values and thus upon educational phenomena. In this chapter we consider a third characteristic of the sociocultural milieu which is important to education in modern society--the social class composition of the immediate community served by the school.

Social class, as one form of stratification, is of particular importance in a modern industrialized society. Although some degree of social differentiation based upon class considerations has very likely obtained in all historical societies, its importance in determining the Zeitgeist of a society's sociocultural milieu is associated primarily with the industrialization process of modern societies.[1] While several factors contribute to its emergent importance in this capacity, the relevance of social class in determining dominant social role orientations in a modern sociocultural environment would appear to be a critical factor. Essentially, middle and upper class members of a modern society are seen to be more instrumental in their social role orientation than are lower class members of that society. Such an orientation is, of course, consistent with the requirements of modern life as discussed in Chapter Two, and, therefore, can be considered more modern.

Classical and Contemporary Views of Social Class

According to Barber, social stratification is the product of the interaction of social differentiation and social evaluation resulting in an arrangement of differential rankings.[2] "Social class" is a term used to represent one form of social differentiation found to be an important explanatory factor in modern society.[3] However, there has been considerable disagreement regarding its meaning and measurement. The classical Marxian view of social class emphasized the role of the production process as the primary basis for social differentiation and evaluation. Specifically, according to Marx, in capitalist societies the major social distinction is between those who own capital and control the means of production (capitalists, grande bourgeoisie) and the workers who are without property or control over the production process upon which they are dependent.[4]

This social differentiation was associated with a social evaluation based upon economic criteria leading to high prestige and rank for the capitalist and low prestige and rank for the worker. By virtue of common experience, the members within each group share a common income, standard of living, mode of life, ideology, culture, psychology, and political view.[5] Social class, while based upon economic factors, is to the Marxian a "multibonded" phenomena (using Sorkin's term),[6] where homogeneous attributes of the collectivity lend themselves to a consensus of solidarity within the production group which separates that group from the other economic group within the society.

Weber agreed in many respects with the Marxian view of the intrinsic nature of social class. He sought, however, to clarify and bring into balance the strong economic bias of the Marxian interpretation.[7] To achieve these ends he introduced a tripartite distinction to the stratification system seen by Marx. His stratification factors were class, status, and party. Class in Weberian terms refers to stratification based upon one's economic position in society. Status stratification is based upon social ranking by "life style" and patterns of social interaction. Party stratification is based upon the distribution of social power within the society. To Marx, status and power were merely reflections of economic classes, but Weber sought to establish their difference. While Weber acknowledged their coalesence, he argued that status and power were not solely dependent upon social class considerations, but rather varied with circumstances.[8]

Contemporary American students of social stratification, greatly influenced by the general empiricist trend in American sociology, have sought to operationalize the definition of social class provided by Weber. In doing so they have to some extent moved away from his tripartite distinction. Mayer, for example, defines social classes as ". . . aggregates of persons with similar amounts of wealth and property and similar sources of income . . . expressed in different ways of life: patterns of consumption, types of education, speech, manners, dress, tastes, and other cultural attributes."[9] This nominalistic definition is shared by others. To Kahl, "if a large group of families are approximately equal to each other and clearly differentiated from other families we call them a social class."[10] For him, the "equality" and "differentiation" in this definition refer to prestige, occupation, possesions, interaction, class consciousness, and value orientations.[11] Gordon, on the other hand, in a well developed arguement, sees social classes as "major status divisions which stratify a community . . ."[12] and argues that major factors of stratification (economic, political, and occupational) are closely associated with the social status system.[13] At the same time, Williams refers to social class as ". . . an aggregate of individuals who occupy a broadly similar position in the scale of prestige."[14] Williams identified such prestige ranking primarily in terms of the extrinsic valuations placed upon power, wealth, group membership and authority by the society.[15] Thus, his view seems reasonably close to that of Gordon. Finally, Barber sees a social class as consisting of ". . . a set of families that share equal or near equal prestige according to the criteria of evaluation in the system of stratification . . ." He further notes that ". . . the inclusiveness . . . of a social class can be set in not one but several ways."[16]

It is apparent from these brief examples that while attempts have been made to define social class in fairly explicit terms, a consensus of its meaning is lacking. The suggestion of ambiguity becomes even more apparent when it is recognized that at least four varying types of criteria are used in measuring social class for purposes of analysis: life style, others' evaluation, self evaluation, and occupation.[17] It would seem, therefore, that in spite of its predictive utility, the term "social class" lacks a clear referent. This is not necessarily an indictment of theory and research in this area of sociological inquiry, for as Reissman has noted, there are many "facets and nuances" to social class.[18] To expect any theory or operational measure of social class to spell out clearly the total complexities of it in terms of its antecedants and consequences for social life is to grant to sociology a wisdom and body of knowledge not yet attained. However, it is possible to consider the body of knowledge on social class by clearly delineating what is meant by the term in a particular setting, justifying its usage in the most logical and parsimonious manner possible, and applying it in research efforts in a way consistent with that usage. For, in the final analysis, the validity and utility of most sociological concepts rests upon the judgement of the informed critic rather than upon an absolute consensus.

Social Class and Modernization

At the great risk of slipping into reification, determinism, and oversimplification, we believe that Marx's original view of social class was essentially correct, for like Marx we believe the primary basis for social class in a modern society is to be found in the production process. Unlike Marx, however, we do not suggest that the production process is the only significant basis for social stratification. Race, ethnicity, ideology, legal and other forms of stratification are important as well.[19] Furthermore, unlike Marx, we view the production process as primarily discriptive of the technological order rather than the economic order--although the two are generally related. Within modern society, in other words, men are differentiated on the basis of occupational roles in the production process. The social evaluation of those roles, however, is based upon the perceived worth of the various combinations of knowledge, skills and orientations required to fulfill the role requirements. Thus, status inconsistencies between occupational roles and income (e.g., clergyman, professor, junkman, etc.) would be interpreted as arising from evaluative discrepancies associated with varying systems of social differentiation.

This view of social class is consistent, we would suggest, with much of the theory and research concerned with stratification in both traditional and modern societies. All societies, traditional to modern, require a division of labor. What distinguishes the division of labor in traditional societies from that found in more modern societies, however, is that the division of labor in traditional society is not based primarily upon the technological order. It is related, of course, but this relationship tends to be a vestigial one associated with an earlier period in the societies' past. Thus, the basis for the division of labor in traditional societies is primarily kinship and wealth.[20] By way of contrast, the dominant basis for the division of labor in a highly modern society apparently rests in particular combinations of skills and orientations associated with positions in the productive process which are consistent with the requirements of the technical system.

The transition from a division of labor based upon kinship and wealth to a stratification system based upon the technical requirements of the society (wherein occupational requirements emerge as a dominant principle of stratification) is not, of course, instantaneous, nor is it ever complete in a particular society. Resistance to change and oligarchial tendencies, among other things, can prevent a completely "functional rationalization"[21] of occupations to transpire. Still, on a comparative basis, it is apparent that occupation becomes an increasingly important factor in determining the structural arrangements of a society as it moves toward the modern end of the traditional-modern continuum.

Max Weber, as noted earlier, identified the term "social class" with the economic aspects of social life.[22] It seems to us, however, that to the extent technology has become crucial in modern life, economic factors (which still form a dominant basis for stratification) do not assume the deterministic role relative to social status or prestige they once may have had. Rather, while income derived from one's occupational position determines in large measure the normative patterns of interaction reflective of one's life style in modern society, it is the social evaluation placed upon the occupation which we feel is increasingly critical in the final analysis. For this reason we shall use the term social class to refer to stratification based upon occupational position.

Applied in this sense, social class becomes critical to an understanding of the influence of social stratification upon the sociocultural milieu of the school as a social organization. Blau and Duncan have captured the essence of this influence when they note that:

> The occupational structure in modern industrial society not only constitutes an important foundation for the main dimensions of social stratification but also serves as the connecting link between different institutions and spheres of social life, and therein lies its great significance. The hierarchy of prestige strata and the hierarchy of economic classes have their roots in the occupational structure; so does the hierarchy of political power and authority, for political authority in modern society is largely exercised as a full-time occupation. It is the occupational structure that manifests the allocation of manpower to various institutional spheres, and it is the flow of movements among occupational groups that reflects the adjustment of the demand for diverse services and the supply of qualified manpower. The occupational structure also is the link between the economy and the family, through which the economy affects the family's status and the family supplies manpower to the economy. The hierarchy of occupational strata reveals the relationship between the social contributions men make by furnishing various services and the rewards they receive in return, whether or not this relationship expresses some equitable functional adjustment as assumed by the functional theory of stratification. Indeed, there is good reason to suspect that such adjustment is often disturbed, because the occupational hierarchy is not only an incentive system for eliciting services in demand but also a power structure that enables men in controlling positions, such as corporation managers, to influence the distribution of rewards.[23]

The Measurement of Social Class in American Society

The ranking of a social collectivity in terms of its perceived values to the effective social utilization of technical skills is the definition of social class most consistent with our approach to social stratification. Concommitants of social class which contribute to general status differentiation include, of course, various other social factors present in a society. Collectively, they contribute to the general ranking of particular groups in the hierarchy of social life. Given that distribution, characteristic values, ideology, norms, etc., become associated with one's social class designation.

To attribute these characteristics solely to one's occupation, however, would be obviously incorrect. Religious, political, historic, environmental and other factors influence the formation and continuity of these characteristics as well. On the other hand, the relative ability of occupation to influence such characteristics appears to increase as the total society becomes more modern.[24] Therefore, in a society as modernized on the whole as is American society, the appropriateness of identifying social characteristics with particular classes is probably closer to being accurate than it would be in a less modern society such as Tunisia, Peru, or Thailand.

A problem of some magnitude in the analysis of social stratification based upon social class is the somewhat mechanical problem of differentiating social classes within a society.[25] Marx originally identified the control over the means of production and property as the primary criteria for distinguishing the bourgeoise capitalist from the proletariat. While he acknowledged the existence of other classes in the industrial society, he felt their significance was minor in the historical struggle between the bourgeoise and the proletariat.[26] Weber, as subsequent events have shown, was more realistic in recognizing the importance of other criteria in addition to property ownership and the control of the means of production. Although not treating them systematically, he acknowledged the growth of "middle classes" who neither controlled production nor necessarily owned property, but on the other hand were not tied to the production process in the manner of the proletariat. Their distinctiveness as a class, according to Weber, rested upon the services and skills sold in the marketplace to the highest bidder.[27] Contemporary sociologists have, by taking a more diffuse approach to the definition of social class, generally identified five and six social classes.[28]

Realistically, given one's analytical intent, as Barber has observed, one may define social class as broadly or as narrowly as is required for purposes of study.[29] From the perspective that social class is the collective ranking of a social group in terms of its perceived value to the effective social utilization of technical skills, it is apparent that a meaningful distinction of social classes rests upon the ability of the investigator to differentiate clearly technical skills relative to their importance on other social characteristics found within the occupational grouping. Such a differentiation can be made in terms of a) the amount of specialized skill and knowledge associated with occupational performance, b) the type of work associated with the occupation, c) the availability of qualified candidates for the occupation in the society, and d) the benefits provided the society (directly or indirectly) as a consequence of the performance associated with the occupation.

Generally, the interaction of these four criteria determine in large measure the relative ranking of social classes in a modern societies' stratification system. Broadly speaking, the greater the technical skill and knowledge required, the greater the perceived contribution of the occupational classes to the society, the fewer the candidates thought to be potentially qualified, and the more desirable the conditions of work associated with the occupations, the higher their ranking.

Fundamental Differences among American Social Classes

Higher ranked occupations form what is generally referred to as the "middle class" and can be roughly contrasted to lower ranked occupations (generally referred to as the "lower class") on a variety of social characteristics of particular relevance to the study of American education.[30]

Family. While the available evidence is neither complete nor fully consistent, it seems reasonable to contrast lower and middle class families in the following manner. Parental roles in the middle class family are more equalitarian and diffuse in nature than are those found in the lower class family. The latter, in contrast, tends to evidence more authoritarian and highly structured parental roles. Attitudes toward children are more permissive in the middle class families, with high emphasis placed upon achievement, intellectual and personal development, while in the lower class family the emphasis is upon control and respect for parental authority. The middle class family is more socially stable than the lower class family.[31]

Social Behavior. Middle class adults tend to place a high value on sociability which is reflected in their greater rate of membership in formal organizations. In addition, among the higher groups in the middle class, business and social interaction are frequently mixed. Conversely, lower class adults tend to be socially inactive, restricting much of their informal activity to relatives.[32]

Religion. Middle class persons tend to be associated with "modern" Protestant or Catholic churches. They tend to support the social gospel and favor such Protestant denominations as the Methodist, Presbyterian or Episcopalian. Lower class persons, in contrast, are either unaffiliated or tend to belong to Protestant sects or fundamentalist Protestant denominations such as the Baptist church. A large number of Catholics are also found in the lower class.[33]

Style of Living. The range of life styles in the middle class is, of course, great. Certain underlying features tend to be consistent, however. Most middle class families own or will own a home. They possess one or two cars, indulge in a moderate amount of television watching and occasional light reading. The highlight of their year is usually a two or three week vacation involving travel away from home. Frequently, the wife works to supplement the family's standard of living, or to assist in sending the children to college. By way of contrast, the lower class family usually lives in an apartment or rents a small home. They may own a car, generally purchased second hand. They do little reading, but a great deal of television watching. Restricted financially and plagued by intermitant work, vacations are rare or absent, as are the middle class amenities of occasional dinners out or Sunday outings. Their style of living has been characterized as one of "boredom and quiet desperation."[34]

Values. The values of the middle class are more distinctively "modern" than those of the lower class. They tend to emphasize work, achievement, rationality, and individualism. While more pronounced in the upper reaches of the middle class, these values are subscribed to by lower level middle class people as well, although their expression frequently is blunted by economic and social circumstance. Lower class people, in contrast, tend to verbalize these values, but adopt what is essentially a more circumspect and fatalistic approach to their validity. Work becomes a way of making a living; achievement is for the lucky. This is a rationale which leads itself to immediate returns. Individual autonomy is to be found only in specific activities with family or friends. The lower class, in other words, is indifferent to, if not alienated from, the dominant values of modern society.[35]

Social Attitudes and Personality. Where middle class individuals may be roughly characterized as optimistic and positive in their attitudes toward life, lower class persons tend to be pessimistic and negative. Thus, it seems to follow that middle class members tend to stress opportunity while the emphasis in the lower class is upon security, not only in work but in interpersonal relations. Lower class males in particular adopt defensive and/or aggressive attitudes toward society generally. In addition, middle class members have been found to be less authoritarian and less biased in their attitudes toward minority groups than have lower class persons--although the evidence is not overwhelming.[36]

The above characterizations of the middle and lower classes are, of course, broad generalizations. Classes are not discrete categories, nor are generalizations always valid. However, there is heuristic as well as analytic value in presenting such generalizations for they allow us to identify some aspects of the underlying sociocultural configuration associated with the environmental constraints within which a school must operate. In this instance, differences in family, social behavior, religious membership, life style, values and attitudes are suggestive of potential or real differences in social role orientation. The emphasis upon equalitarian and permissive relationships within the middle class family, its concern with social activity, its membership in the established churches, as well as its endorsement of particular values and attitudes, are all suggestive of a more "instrumental" approach to social relationships. In contrast, the concern of the lower class family with the control of its children, its social inactivity, and its membership in emotionally oriented religions, as well as its values and attitudes suggest a more non-instrumental, if not expressive, orientation to social relationships. The dominance of one or the other types of role orientation in a given sociocultural setting would very likely result in significantly different constraints for the school. We turn now to research on education and social class in order to identify, if possible, what effect social constraints associated with these differences do have on education in American society.

Educational Correlates of Social Class Differences

There has been a great deal of research on the relationship of social class to student behavior, motivation, and attitudes. It is known, for example, that although there is little difference in initial school enrollment rates among the social classes,[37] the dropout rate of children from school is greater among the lower class than among the middle class.[38] As Folger and Nam show, "dropping out" of school for these students has a great subsequent effect in labor force participation.[39] Also, directly related to dropping out of school is age-grade retardation. Again, the lower the social class identification of the child, the greater the probability of his being retarded by the school.[40]

The relationship of social class to academic achievement in high school is well known, although its relative importance is uncertain.[41] However, the association of social class to academic performance does not end with high school. Going to college from high school is a class related phenomena as well. Folger and Nam report that ". . . among those who actually attend college in the year that they graduated from high school, the proportion coming from white-collar families was about twice that from other families. . ."[42] Although early research by Wolfle suggested that the influence of socioeconomic factors vanished once the student was in college,[43] subsequent research by Eckland,[44] and by Sewell and Shah,[45] using longitudinal designs, suggest that social class factors are important in the probability of college graduation as well.

Given the consistent association of social class and school related behavior in American society, research has quite naturally sought explanatory factors. Early research attempted to show that social class differences were little more than differences in intelligence. However, numerous studies have since shown that intelligence, as measured by standardized tests, while attenuating the social class-school behavior relationship slightly, does not eliminate it.[46] Recent research has focused more on motivational differences among the social classes and tends to show that students from higher classes are motivated to achieve in school to a greater extent than are students from the lower classes.[47]

Motivation, in turn, has been related to the attitudes, values, and beliefs regarding life generally and education specifically. This research has lead some investigators to conclude that differences in the behavior of students from different social classes are due, by and large, to differences in achievement aspiration resulting from values and beliefs regarding education learned in the home. The conclusion appears to be that since lower class families have different values and beliefs than middle class families, their children do less well in school.[48] Such a conclusion, emphasizing as it does the importance of the family in the socialization of youth, has great appeal and contains a certain measure of "common sense" truth. It is basically this line of reasoning that led Coleman and his associates to the conclusion that the school itself has little effect upon children beyond that attributable to variation in the nature of their home environments.[49] However, the issues (both theoretical and methodological) of partitioning variation in pupil behavior in terms of that attributable to home versus school are very complex. Therefore, we have extended our review to examine the available evidence on the effects of the social class context of schools.

Social Class Context and the School

The preceding discussion suggests there is a good deal of evidence to support the conclusion that social class origins have an effect upon an *individual's* performance in formal education. A more complicated question, however, is whether or not the *school* is influenced by the social class characteristics of the neighborhood or community it serves sufficiently to affect the performance of its institutional role, and further, whether such an effect exists in addition to whatever effects may be attributed to the social class origins of the student body itself. There have been two major approaches to this question. One approach, basically social psychological and behavioristic in nature, has been to determine the social class composition of a school's student body and to posit the development of a "normative climate" which influences student attitudes, aspirations, and achievement independent of the effects of the pupils' own social class background. The second approach, more sociological and structural-functional in nature, has been to study the effects of the social class context upon particular aspects of the school as a social organization--effects which in turn may influence pupil behavior independent of the effects of the pupils' social origins.

Research on the effects of the social class composition of the student body upon student attitudes, aspirations, and achievement is somewhat inconsistent in its findings. Early research by several investigators led to the conclusion that the social class composition of the student body leads to the development of "normative climates" which vary in the degree to which they support appropriate attitudes and achievement.[50] Specifically, this research suggests that schools having a high proportion of middle class students in attendence develop climates postively associated with high aspirations and achievement, while schools with a high proportion of lower class students develop climates negatively associated with high aspirations and achievement. More recently, however, Sewell and Armer, using a relatively elaborate research design in which sex, I. Q., and the social class of the students' family was controlled, found that the social class composition of the student body contributed little to the college going plans of students above and beyond that attributable to the characteristics of the individual and his family.[51] Such a finding, while hardly conclusive, suggests the complexities associated with the behaviorist approach to the problem.

The second major approach, studying the effects of the social context upon aspects of the school as a social organization is also limited but has resulted in more conclusive findings. Research has consistently shown the middle class predominance in teacher origins.[52] Thus, it is not surprising to find that teachers tend to prefer locations in which the student body is predominantly other than lower class.[53] More importantly, perhaps, both principal and teacher morale, performance, and qualifications have been shown to be lower in the lower class schools than in the middle class schools.[54] Other differences have been reported between schools serving middle and lower class areas in terms of textbooks,[55] facilities,[56] pupil-teacher interaction,[57] counseling,[58] and other pupil services.[59]

The bases for these differences in organizational aspects of schools in varying social class contexts are undoubtedly numerous. However, as Corwin and others have pointed out, the predominance of middle class personnel in teaching, administrative, and school board positions has lead to the conclusion that the school is a "middle class agency."[60] Thus, one might explain the lack of success of lower class children in school in terms of their not having the necessary role orientation at the time of entry into school or the appropriate attitudes and values necessary for adaptation to this middle class orientation of the school. On the other hand, such an explanation begs a more fundamental set of questions centering upon why the school should emphasize the "middle class achievement syndrome." Certainly, the often stated explanation that America is a "middle class" or bourgeoise society tells us less about the reasons for middle class emphasis in the schools than it does about the ideological biases of the informant. More realistically, insight into this relationship would seem to lie in a more macroscopic view of the importance of the social class context for schools as open social systems vis a vis their institutional role, which, in this instance, includes the development of a role orientation highly congruent with that of the middle class.

Summary

After identifying varying classical and contemporary views of social classes, this chapter linked systematically the concepts of social class and modernization. Building on the work of Marx and Weber, we distinguished between a division of labor in traditional societies based primarily on kinship and wealth and that in modern societies based primarily on the possession of particular skills and orientations required by society. Within modern societies, the degree to which an occupational group possesses these skills and orientations was seen to determine its placement within the stratification system.

We also considered the problem of differentiating social classes within a modern society and concluded that it is a rather arbitrary matter. The number of social classes defined or identified will vary with the purposes of the investigator. However, for the purposes of discussion, two ideal-typic social classes were identified and characterized. It was argued that the "middle class" represents a higher level of modernization than does the "lower class."

Fundamental differences between ideal-typic social classes at different points along a social stratification continuum were suggested in terms of their dominant social role orientations. Differences between different social class contexts in social attitudes and behavior and with respect to school related phenomena were also noted. Particular attention was paid to the effect of the social class context of the school (as opposed to the social class context of the home) upon educational phenomena.

As in the two previous chapters, these results are seen as merely suggestive of differences in the organizational structure and functioning of schools in different social class contexts which should be observable if our view of the school as an open social system is correct. In the following chapter we will attempt to synthesize our assumptions and expectations regarding the effects of the sociocultural context of schools on their structure and functioning.

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14. Robin M. Williams, Jr., *American Society: A Sociological Interpretation* (New York: Alfred A. Knopf, 1951), p. 98.

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16. Barber, *op. cit.*, p. 73.

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18. *Ibid.*, p. 37.

19. For a discussion of these and other forms of stratification, see Barber, *op. cit.*, Chapter 3.

20. While there is no doubt that kinship and wealth remain important in modern societies, as well as in traditional societies, the importance of the technological order appears to be rapidly replacing these conventional criteria as the society becomes more "rationalized" in terms of the needs of modern life.

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Chapter Eight. Theoretical Considerations

The preceding chapters have focused on the problem of equality of educational opportunity in contemporary America and on a view of the public school as an open social system which holds promise for shedding additional light on the causes of inequality. In this chapter we relate the variations in the three sociocultural contexts considered in Chapters Five, Six, and Seven to the model of the school set forth in Chapter Four and propose a working hypothesis which can guide our subsequent investigation of the relationship of the sociocultural context of American public schools to their organizational structure and functioning. Evidence of such a relationship can provide important documentation for our assumption (made in Chapter Two) that relationships between modernization and education, which have been noted cross-culturally, also exist within a highly modern society such as contemporary America and place constraints upon the equalization of opportunity through the mechanism of public education as it is now constituted.

Sociocultural Influences on American Public Schools

There are a variety of sociocultural environments or contexts which influence the American public school as a social organization. In the three previous chapters we considered at length variations in the regional, metropolitanizational, and social class contexts within America and the available evidence on how such variation is associated with variation in educational phenomena. However, we were greatly limited in our analysis by the fact that past research is also limited and has focused primarily upon the individual as the unit of analysis, rather than upon the school. However, in spite of these limitations, some theoretical generalizations seem warranted.

Regional Context. When one links the extremes in ideology and values associated with the degree of modernization in different regions of American society with the institutional role of education, it is apparent that educational organizations may be expected to vary appreciably from one region to another. In the three most modern regions identified in Chapter Five (Northeast, West, and Great Lakes) the emphasis upon progress, social morality, and material reward are relatively higher than is the case in the less modern regions (i.e., Plains and Southeast). On the other hand, the less modern regions tend to be relatively higher in conservatism, individualism, and traditional morality. Conformity and pragmatism was observed to be fairly evenly distributed over all regions with the exception of the Southeast. In anticipating the effects of regional context on the school as a social organization, we shall concentrate on those dominant beliefs and values which we have argued vary in their emphasis among the several regions.

"Progress" is a difficult term to define but it is of critical importance to an understanding of regional variation in American education. Still, as we have used it, progress has a definite meaning in American society, and this is especially true in the more modern regions. The essential aspects of progress as a process are illustrated by Williams when he states that the term encompasses the belief that ". . . human nature is subject to continuous improvement and that society as a whole is inevitably moving toward a better order of life."[1] Thus, in this sense, the belief in and high evaluation of progress make acceptable changes which are justified both in terms of individual achievement and the group's status.

The criteria for proposed change, of course, must be consistent with what is socially defined as "improvement." While many of the values and beliefs held by Americans undoubtedly contribute to a determination of what constitutes improvement, there seems little doubt that improvement in most cases is generally viewed to mean increased material well-being achieved through greater efficiency.[2] As critics of American society have correctly pointed out, materialism is its primary motif. Said in somewhat less ideological terms, in contemporary America material returns seem to be the principal basis for considering whether or not a particular change will be construed as progress. Thus, a higher standard of living, more extensive medical care, more efficient communication and faster transportation, tend to be seen as social progress to the extent that they contribute to the well-being of the members of society. On the individual level, a newer car, a bigger home, a job promotion, a longer vacation, etc., are generally viewed as achievement and evidence of individual progress.

Progress defined in terms of these material rewards is also expressed in the more modern regions through social morality. As Niebuhr and Herberg have suggested, such a morality becomes defined as a social ethic, oriented toward helping others who are materially less well off than oneself.[3] It is interesting to note that such morality, extrapolated to the sociocultural setting, does not violate the intrinsically individualistic thesis of the Protestant Ethic. Rather, it tends to confirm in a particularly secular manner the effect of what has been referred to as the "social gospel," i.e., being one's brother's keeper.

Both ideally and typically, a school within one of the more modern American regions can be characterized as an organization whose inputs and outputs are evaluated in terms of the progress, material reward, and social morality previously discussed. In such a context, one would anticipate an open system whose organizational purpose is seen to closely approximate the institutional role of education previously identified with a modern society. Thus, the regional sociocultural context would tend to be supportive of progress at the organizational level in that the educational changes felt to "result in" better achievement for the students would be defined in terms of the skills and orientations necessary to contribute to the larger society as well. Such a sociocultural milieu would be particularly amenable to both the school's specialization of function and its structural differentiation associated with the increasing complexity of organization, since these are consistent with the notion of "progressive" improvement and efficiency in the services provided for the community by the school. Further, feedback to the organization in such a context would be attuned to those tangible measures of progress associated with education's institutional role, such as the proportions of pupils who graduate, go on to further education, or drop out. Organizational sensitivity to such matters encourages a high emphasis being placed upon the schools adaptability to the exigencies of societal needs that are relatively independent of the local social context. Since the more modern regions manifest values and beliefs consistent with such feedback sensitivity on the part of the organization, boundary and maintenance concerns assume less organizational importance.

In contrast, the emphasis on individualism, conservatism, and traditional morality characteristic of the less modern American regions may be considered in terms of its anticipated consequences for the school as a social organization. As previously observed, such a combined emphasis is associated with a sociocultural milieu wherein respect for order and authority is tempered with the belief in the individual's "right" to succeed or fail by virtue of his own efforts. Thus, the sociocultural milieu is deemed by its membership as a "natural" state of affairs wherein status differences and the accompanying differential treatment patterns are consistent with the individual's proven worth to the community. Therefore, perceived changes (with the possible exception of some technological changes) in the school are generally interpreted as inappropriate since they generally threaten the "natural" balance of the community.

Within such a context, the school as an open system manifests a greater concern with legitimating its role in the larger community than with the development of more progressive "reforms." Increasing complexity of organization is construed as a bureaucratic threat to the individual rather than an aid to his progress and is frowned upon. Subscription to the modern institutional role as the purpose of the school is less clearly evident because of the greater emphasis upon the maintenance of existing standards of performance associated with local traditions rather than in terms of the needs of the larger society. Accordingly, the organization is required to devote a great deal of energy to satisfying local constraints in the less modern regions rather than to its productive and adaptive requirements. Therefore, sensitivity to institutional feedback is reduced, while sensitivity to feedback associated with traditional concerns is paramount.

Metropolitanizational Context. When applied to our conceptualization of the school as a social organization, the argument and evidence presented in Chapter Six suggest the importance of differences in the sociocultural context associated with metropolitan and non-metropolitan life. Beyond the variation in value emphasis previously associated with regional context, non-metropolitan community life tends to support a view of the school's purpose consistent with its concern for the solidarity of the community. Thus, the school becomes defined to a large extent as an agent for community cohesion and continuity. The use of the school for non-educational activities associated with community life, accordingly, is a commonly accepted practice in non-metropolitan areas. On the other hand, the genesis of metropolitan life rests upon the instrumentality of meeting the varying material and social needs of a highly complex industrial and commercial order. For the metropolitan community, then, service organizations like the school tend to be perceived less as agents for community cohesion and more as a means to both individual and community progress. This metropolitan view of the school is consistent, of course, with the institutional role of education in modern society.

Given the above differences in the community perception of the school, it is reasonable to anticipate differences in the emphasis upon subsystem structure within the school. In the non-metropolitan schools, boundary and maintenance subsystems would receive much more of the available energy than would production and adaptation. Local environmental constraints associated with community tradition and solidarity would tend to lead to a greater requirement for maintaining the existing system, thereby reducing efforts to develop the productive and adaptive capabilities of the system. Accordingly, adminstrative control and conformity to existing educational practices would tend to be accentuated in terms of a high sensitivity to feedback from the local environment. Institutional requirements, as reflected in accreditation and certification practices, on the other hand, would tend to be seen as less constraining, since their importance to the community would be viewed as more peripheral to the purpose of the school.

In contrast to the school in the non-metropolitan community, we would anticipate that the subsystem structure of schools in metropolitan areas would tend to place a relatively greater emphasis upon production and adaptation. The perception of the school as being associated with both individual and social progress focuses the energies of this school upon processes directly concerned with its institutional role. Thus, concern with curriculum, teacher qualification, testing practices, and student performance on the one hand, is matched by energies expended in adapting to the changing needs of society on the other hand.

Directly related to the above differences in schools found in metropolitan and non-metropolitan areas would be the greater tendency for metropolitan schools to differentiate by specialization in the three ways previously discussed in Chapter Four. By differentiation through the subject matter taught, specialized services such as counseling or coaching, and organizational handling of a smaller segment of potential age-grade cohort, metropolitan schools can more efficiently adapt to both their institutional role and the complex requirements of metropolitan life. Thus, for example, the growth of specialized high schools in metropolitan centers to meet particular vocational, social, or academic requirements would not be uncommon.

Social Class Context. In Chapter Two societal needs within modern America were perceived to center upon the utilization of formal education to prepare students for adult roles through transmitting knowledge and skills and by instilling an appropriate orientation. Although such needs tend to be congruent with middle class experiences and orientations, our review of the literature on class differences (Chapter Seven) suggests that this is not the case concerning lower class experiences and orientation. Middle class life experience in American society is generally associated with the type of behavior necessary to execute the complex requirements of large-scale organizational life. Middle class families stress the importance of achievement (intellectually as well as socially), and at the same time channel its expression within the boundaries of socially approved organizational life. Thus, membership in highly institutionalized churches and participation in social, athletic and community organizations furnishes the young middle class child with experiences not unlike those he is required to undergo in school. Given such experiences, values regarding such factors as work achievement, rationality and individualism, become reinforced positively and form the basis for an orientation toward social life. Role behavior becomes defined in terms of general standards rather than specific relationships, with priority given to achievement as opposed to particular social attributes and tends to be restricted to a given situation free from emotional considerations.[4]

By way of contrast, the experiences of the lower class child, even though he may share these "middle class" values, contain neither encouragement of these values nor the opportunity to express them. This tends to result in experience leading to an orientation toward life wherein role behavior is defined in terms of particularistic loyalties to family or friends, and where interaction with others is couched in terms of categorical attributes and applied uniformly in different situations, dependent upon the emotional loading of any specific situation. Thus, lower class children by virtue of relatively unstable family relationships and limited adult organized social participation outside of school, seek and find rewards in personal relationships among others like themselves by building loyalties that cut across situational boundaries. Since achievement in socially approved areas of life is limited, the lower class child rationally seeks achievement in non-work related activities that do not involve participation in middle class organizational life, thereby reducing his potential experience appropriate for effective behavior in schools.[5]

Therefore, given these different experiences, the basic difference between a predominantly lower and a predominantly middle class sociocultural context may be viewed as role orientation differences learned in the context of the different life chances available to the majority of lower class versus middle class children. Such differences are significant for the school in several respects. Middle class role expectations are not unlike those which the school seeks to inculcate in fulfilling its institutional role and, accordingly, production throughputs (i.e., pupils) are much more amenable to organizational influence. Further, because achievement is closely associated with occupational status (which, in turn, is highly dependent upon education in American society), the discrepancy between institutional demands and local environmental constraints is slight. This allows the school to emphasize its adaptation and production subsystems and devote less concern to maintenance and boundary problems. By virtue of the congruence between institutional demands and environmental constraints, sensitivity to negative feedback from institutional sources is increased. Thus, the middle class school can expend a great deal of energy in developing its production and adaptation subsystems in terms of societal requirements.

In contrast, the role orientation dominant in a lower class sociocultural context places constraints upon the school leading to an emphasis upon the maintenance and boundary subsystems. Lower class orientations to education, like their orientations to social behavior, generally tend to be particularistic and diffuse. Accordingly, parents frequently view the school in the same fashion as they view other public agencies--with a large measure of distrust and/or indifference. Lower class throughputs (i.e., pupils), by virtue of a similar orientation, become quickly defined as "problems" by the school. Such school-environment relationships quickly force a defensive posture upon the school, leading to an emphasis upon internal maintenance concerns and school-environment relations. Thus, schools in lower class contexts use a great deal of energy in controlling student behavior and in attempting to isolate themselves from potential or real conflicts with their lower class environment.

A Working Hypothesis

Implicit in the above reasoning are a multitude of assumptions which eventually must be documented regarding the relationship of the sociocultural context of American public schools to their organizational characteristics and subsystems. Some of these assumptions can currently be be documented, either directly or indirectly, by existing research (see Chapters Five, Six, and Seven), but many can not. Therefore, in order to begin the necessary task of obtaining more systematic evidence regarding the organization-environment relationship of schools, particularly as it relates to the current debate regarding the equalization of educational opportunity, we have performed a secondary analysis of a large body of existing data. These data (which will be described in detail in Chapter Nine) contain measures of the organizational structure, input, throughput, and output of a national sample of American schools in 1965. Although suffering from the typical limitations of secondary analyses, our examination of these organizational characteristics can provide direct documentation of some dimensions of the organization-environment relationships of schools and indirect documentation of others. Given such a start at systematic documentation, it is hoped that further research can then be designed which permits an exploration of the effects of the sociocultural context of schools on many of the more subtle aspects of their organizational structure and functioning discussed in Chapter Four.

The evidence and reasoning introduced above with respect to the sociocultural contexts of region, metropolitanization, and social class have led us to formulate the working hypothesis that the more modern the sociocultural context of the American public school, the more modern its organizational structure and functioning. This hypothesis is obviously very broad and only one of many which could be offered in exploring the school as an open sociocultural system. It is proposed at this time because it can be tested with existing data.

In the chapters which follow we will elaborate further this working hypothesis and present systematic empirical evidence that the expected relationships can be observed within contemporary American society. In conclusion we will comment on the implications of this relationship for further theoretical and empirical efforts in this important area of social inquiry.

Notes and References (8)

1. Robin Williams, *American Society*, Second Edition, Revised (New York: Alfred A. Knopf, Inc., 1960), p. 432.

2. *Ibid.*, pp. 433-436.

3. H. Richard Niebuhr, *The Social Sources of Denominiationalism*, Meridean Edition (Cleveland: The World Publishing Co., 1957); Will Herberg, *Protestant, Catholic, Jew*, Revised Edition (Garden City, New York: Doubleday and Co., Inc., 1960).

4. This discussion is derived primarily from an application of the pattern variables to the social system by Parsons. See Talcott Parsons and Edward A. Shils, Editors, *Toward A General Theory of Action*, Harper Torchbook Edition (New York: Harper and Row, 1962), pp. 80-84.

5. For a more extended discussion of lower class life, see Frank Reissman, *The Culturally Deprived Child* (New York: Harper and Row, 1962).

Chapter Nine. Background of the School Context Study

In order to conduct a preliminary test of the working hypothesis presented in Chapter Eight, we have turned to the data of the School Context Study (SCS), an inquiry which grew out of the Equality of Educational Opportunity Survey carried on by the U. S. Office of Education between 1964 and 1966.

Section 402 of the Civil Rights Act of 1964 directed the United States Commissioner of Education to examine inequalities of educational opportunity related to racial, religious, and ethnic characteristics of the American population. To accomplish this, a national survey of a sample of approximately 650,000 students in grades one, three, six, nine, and twelve was carried out during the 1965-66 school year under the direction of Professor James S. Coleman of Johns Hopkins University.[1] In addition, several smaller studies were conducted to investigate the question of inequality of educational opportunity in ways not possible within the larger study.

One of the additional studies explored the effects of social and economic factors on non-enrollment in school.[2] Florida State University and the U. S. Bureau of the Census were asked to cooperate in supplementing the October 1965 Current Population Survey (CPS) of the Census Bureau to obtain detailed information on the home and school environments of enrolled and non-enrolled persons between the ages of six and nineteen.[3] At the time of the October 1965 CPS interview, the mother of each child between the ages of six and thirteen in a national sample of 35,000 households was also asked special questions about her aspirations for her child, and about the child's motivation to attend school. In addition, the census enumerator left special forms for the mothers of any children in these households between the ages of fourteen and nineteen, and for these children themselves. The mother's questionnaire focused on her attitudes toward formal schooling and the family's provisions for the continued schooling of their children. Forms left for the children focused on their attitudes toward school and also on their motivation for further schooling. Through a systematic procedure of mailed follow-ups and return visits to the home, 96 percent of these forms were returned with useable replies to preselected key questions.[4]

In order to consider the attitudes and behavior of these children in the context of their schools as well as in the context of their homes, information about the schools being attended by each child currently enrolled in school (and last attended by each child currently not enrolled in school) was required. Questionnaires were sent to the chief administrator of the approximately 10,700 public and non-public schools attended by the 27,000 persons between the ages of six and nineteen in the CPS sample. These forms requested information about the child's performance in school, as well as about the social and educational characteristics of the school's student body and staff.

Due to a rather unusual skepticism on the part of many school administrators regarding the activities of the U. S. Office of Education in the Fall of 1965 (particularly in such areas as school desegregation, national assessment, as well as regarding the major Coleman study itself), rather unusual resistance was met to the school and pupil questionnaire mailed by the Bureau of the Census. However, through extensive negotiations and follow-ups by the Bureau of the Census, the return of approximately 73 percent of each form was accomplished. An analysis of the social and economic characteristics of the 73 percent of the pupils for whom the school and pupil questionnaries were returned with those of the target sample suggests that the rather high nonresponse rate, although evidently not random across all regions and metropolitan areas, is unlikely to affect the relationships being examined in this report.[5]

As a first step in exploring the theoretical and substantive issues raised in Chapters One through Eight above, we have performed a secondary analysis of the SCS data obtained from the School Questionnaire returned by the chief administrators of these public and non-public schools.[6] The organizational structure and functioning of 7,771 American schools have been examined in terms of three types of "modernization context" in which these schools are located. In this chapter, we describe the procedures used in defining these contexts. In addition, we report the association of the three context variables with several other important variables. With this as a background, we will turn in Chapters Ten through Twelve to a preliminary test of the working hypothesis offered in Chapter Eight.

Definition and Measurement of Modernization Context Variables

Regional Context. The sociocultural location of American schools can be characterized in many ways. The most macroscopic level at which such definition has traditionally taken place is that of region, a subdivision of the United States into a limited number of broad areas having geographic compactness, and social and historical uniqueness. We have argued earlier (Chapters Five and Eight) that regional variation in modernization exists in America and that it is related to variation in schools as social organizations. However, in our attempts to capture the essence of this regional variation for purposes of empirical inquiry, we have been torn between a desire to utilize the ideal regional definitions identified in Chapter Five and the necessity to confine ourselves to the nine geographical divisions used by the Bureau of the Census in coding the data available to us.

An examination of Table 9-1 can reveal something of the problem which we faced. There the modernization scores discussed in Chapters Two and Five for each of the 48 coterminous states are presented. It is apparent that the states forming the Census divisions of Middle Atlantic, New England, Pacific, and East North Central (see Figure 9-1) generally contain states which rank high on the modernization index. On the other hand, states in the East South Central, South Atlantic, West South Central, and West North Central divisions generally rank low. However, there are some exceptions, most notably Maryland and Delaware in the

Table 9-1. Ranking in 1960 of 48 Coterminous American States by Modernization Index, Giving Population and the Regional Assignment Used in the SCS Study and an Ideal Alternative.

Rank	State	Modernization Index	Population 1960	Regional Assignment	
				SCS Study	Ideal Alternative
1	Connecticut	6.29	2,535,000	A	A
2	Massachusetts	6.10	5,149,000	A	A
3	New York	5.51	16,782,000	A	A
4	California	5.15	15,717,000	B	B
5	New Jersey	5.04	6,067,000	A	A
6	Rhode Island	4.24	859,000	A	A
7	Illinois	4.16	10,081,000	C	C
8	Pennsylvania	4.03	11,319,000	A	A
9	Michigan	3.96	7,823,000	C	C
10	Maryland	3.56	3,101,000	E	A
11	Ohio	3.41	9,706,000	C	C
12	Colorado	3.22	1,754,000	B	D
13	Delaware	3.06	446,000	E	A
14	Washington	2.98	2,853,000	B	B
15	Utah	2.44	891,000	B	D
16	Oregon	1.96	1,769,000	B	B
17	Nevada	1.92	285,000	B	B
18	New Hampshire	1.54	607,000	A	A
19	Missouri	1.48	4,320,000	D	C
20	Florida	0.93	4,952,000	E	E
21	Minnesota	0.93	3,414,000	D	C
22	Wisconsin	0.65	3,952,000	C	C
23	Indiana	0.11	4,662,000	C	C
24	Arizona	-0.03	1,302,000	B	D
25	Texas	-0.37	9,580,000	D	D
26	Kansas	-0.48	2,179,000	D	D
27	Iowa	-0.61	2,758,000	D	C
28	Nebraska	-0.95	1,411,000	D	D
29	Maine	-1.10	969,000	A	A
30	Oklahoma	-1.23	2,328,000	D	D
31	Vermont	-1.36	390,000	A	A
32	Wyoming	-1.49	330,000	B	D
33	Louisiana	-1.55	3,257,000	D	E
34	Virginia	-2.30	3,967,000	E	E
35	New Mexico	-2.35	951,000	B	D
36	Montana	-2.46	675,000	B	D
37	West Virginia	-3.12	1,860,000	E	E

Table 9-1. Continued

Rank	State	Modernization Index	Population 1960	Regional Assignment	
				SCS Study	Ideal Alternative
38	Georgia	-3.44	3,943,000	E	E
39	Tennessee	-3.58	3,567,000	E	E
40	Idaho	-4.02	667,000	B	D
41	South Dakota	-4.63	681,000	D	D
42	Alabama	-4.75	3,267,000	E	E
43	North Carolina	-4.88	4,556,000	E	E
44	North Dakota	-4.97	632,000	D	D
45	Kentucky	-5.32	3,038,000	E	E
46	Arkansas	-5.49	1,786,000	D	E
47	South Carolina	-5.50	2,383,000	E	E
48	Mississippi	-6.74	2,178,000	E	E

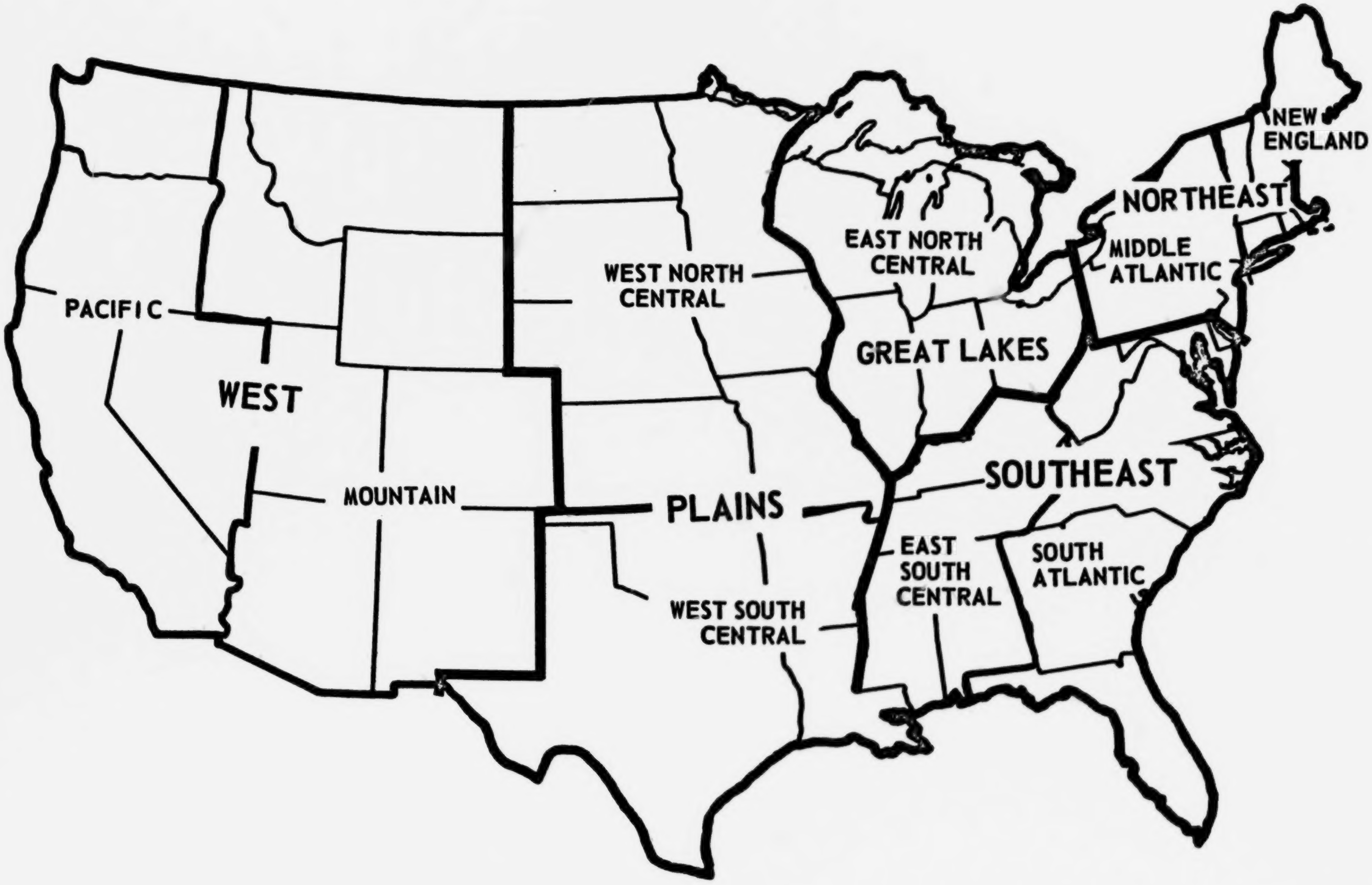

NEW ENGLAND
NORTHEAST
MIDDLE ATLANTIC
EAST NORTH CENTRAL
GREAT LAKES
WEST NORTH CENTRAL
PACIFIC
WEST
MOUNTAIN
PLAINS
SOUTHEAST
EAST SOUTH CENTRAL
SOUTH ATLANTIC
WEST SOUTH CENTRAL

Figure 9-1. Five sociocultural regions (bold print) of the School Context Study created from the nine geographical divisions (light print) of the U. S. Bureau of the Census.

South Atlantic, and Minnesota and Missouri in the West North Central. The Mountain division is particularly variable, with Nevada, Utah and Colorado ranked above the median of the 48 coterminous states and Idaho, New Mexico, Montana, Arizona and Wyoming ranked below.

In addition to a constraint to work within the nine geographical divisions of the Bureau of the Census, we also needed to define a limited number of regional contexts of states which are both coterminous and of relatively equal populations so that the regions would have geographical integrity and any statistical analyses performed within regions would have similar reliabilities. Therefore, to satisfy the three objectives of tradition, homogeneity of modernization within regions, and similarity of population size across compact regions, it was decided to combine the nine Census divisions of the United States into five regional contexts of varying degrees of modernity as follows: A. Most modern: Northeast (Middle Atlantic + New England), B. West (Pacific + Mountain), C. Great Lakes (East North Central), D. Plains (West North Central + West South Central), and E. Least modern: Southeast (South Atlantic + East South Central).

Table 9-2 presents the modernization scores for these five regions computed by weighting each state's modernization index by its population in 1960 (both figures are tabulated in Table 9-1) and averaging across the states within each region. In Table 9-2 it can be noted that the modernization scores for these five regions are ordered monotonically from a high of +4.90 in the Northeast region to a low of -2.84 in the Southeast. Further, the percentage of the total United States population located in each region is relatively uniform, ranging from a low of 15.3 percent in the West to a high of 25.1 percent in the Northeast.

Some understanding of the validity of such a regional grouping in terms of our concept of modernization can be gained from an inspection of Figure 9-2. There the modernization scores for the five regions discussed above have been juxtaposed against the "ideal" alternative grouping introduced in Chapter Five (see Figure 5-2).[7] It is apparent that the more ideal alternative makes a clearer distinction among different coterminous parts of the United States than does an approach such as ours which is limited to combinations of the nine Census divisions. Therefore, our identification of five regions in terms of their varying degrees of modernization is a conservative one. Although our approximation is rather close to the ideal, those differences in the organizational structure and functioning of schools which we shall attribute to regional differences in modernization (see Chapters Ten through Twelve) are likely to underestimate the true differences which would obtain from regional distinctions less bound by traditional definitions and thus more sensitive to contemporary differences in modernization.[8]

Table 9-3 presents the number of public or private schools estimated to be in each of the five SCS regions in 1965-66 as well as the number available to us for analysis. These schools contain 14 percent of all

Table 9-2. Population and Modernization Score in 1960 for Five Regional Contexts.

Regional Context	Population Number	Population Per Cent	Modernization Index
Northeast	44,677,000	25.1	4.90
West	27,194,000	15.3	3.46
Great Lakes	36,224,000	20.4	3.01
Plains	32,346,000	18.2	-0.68
Southeast	37,258,000	21.0	-2.84
All Contexts	177,699,000	100.0	

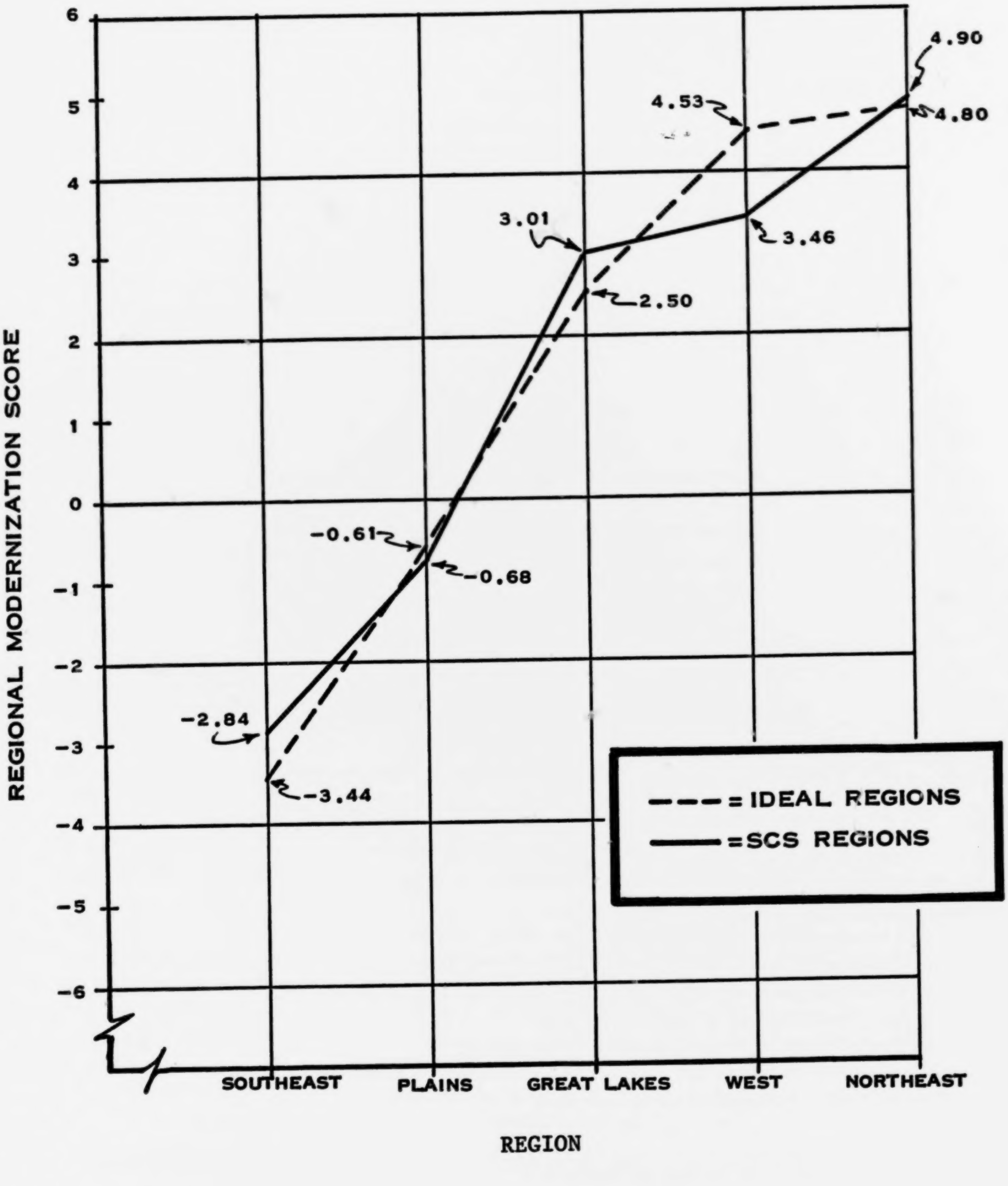


Figure 9-2. Comparison of modernization scores for "ideal" and SCS regions.

Table 9-3. Comparison of SCS Sample of Public and Private Schools with 1965-66 USOE Population Estimates, by Regional Context.

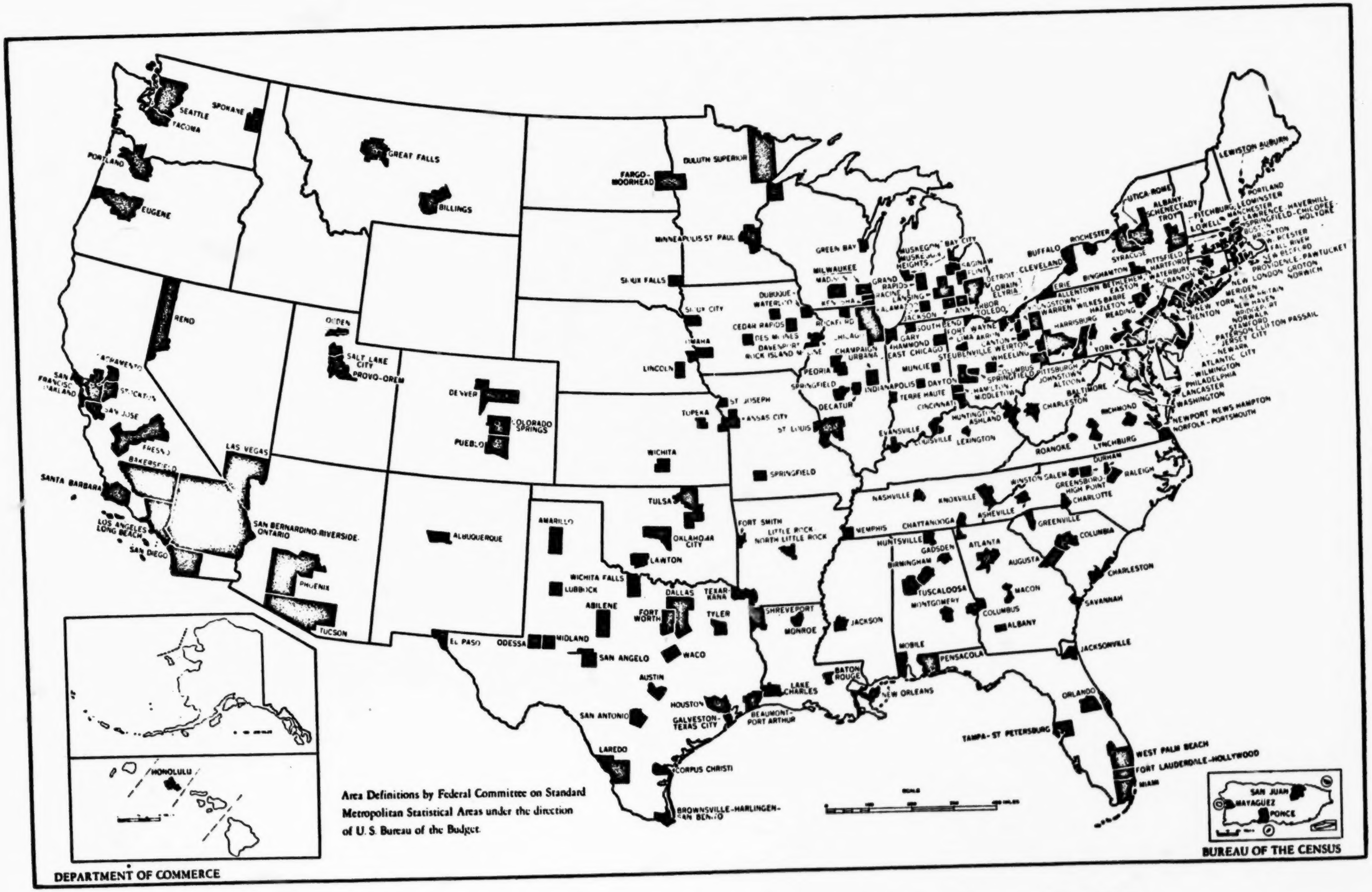
Regional Context	Number of Schools		Post Factum Sampling Fraction
	SCS Sample	USOE Estimates[a]	
Northeast	2,181	23,169	9.4%
West	1,399	17,895	7.8
Great Lakes	1,095	22,898	4.8
Plains	2,045	33,046	6.2
Southeast	1,051	26,228	4.0
All Contexts	7,771	123,247	6.3

[a] Source: U. S. Bureau of the Census. Statistical Abstracts of the United States, 88th Edition. (Washington, D. C., U. S. Government Printing Office, 1967), p. 110.

public and private school pupils in the Fall of 1965. Over all, the 7,771 schools attended by the pupils in the October 1965 CPS sample represent 6.3 percent of all public or private schools in the United States in 1965-66. However, the post factum sampling fractions by region vary from a high of 9.4 percent in the Northeast to lows of 4.0 percent in the Southeast and 4.8 percent in the Great Lakes region. These variations reflect primarily a tendency of schools to have been selected by the Census Bureau somewhat more frequently in areas of the greatest population density, as well as the varying willingness in 1965-66 of school officials to participate in "sensitive research" sponsored by the Federal Government. However, given the magnitude of the sample size and the favorable results of our analysis of the non-response (see Appendix A), it is very doubtful that the limited variation represented in Table 9-3 affects the validity of the generalizations which we later make from these data.

Metropolitanizational Context. A second major sociocultural variable which we have argued is related to variations in the organizational characteristics of American schools is the metropolitanizational context of the general area in which the school is located (see Chapter Six). Although one could become rather elaborate in identifying a variety of areas of varying metropolitan characteristics,[9] in this report we have limited ourselves to a definition of metropolitanism utilized by the Bureau of the Census.[10] We have identified schools as being located in "non-metropolitan" areas if at least two-thirds of the pupils in the CPS sample attending that school lived outside of one of the 212 Standard Metropolitan Statistical Areas (SMSAs) defined by the 1960 U. S. Census of Populations and presented in Figure 9-3. Similarly, schools were defined as located in the "central city" if at least two-thirds of the sample pupils lived in the central city of an SMSA, and in the "ring" if at least two-thirds lived in the ring of an SMSA. Such an assignment was made for 7,296 (94%) of the 7,771 public and private schools in the SCS Study.[11]

Consistent with the reasoning introduced in Chapter Six, we shall consider schools located in the central city to be in highly modern contexts, those in the ring to be in less modern contexts, and those in non-metropolitan areas to be in the least modern contexts. Obviously, these three rough categories only approximate the underlying rural-urban continuum discussed in Chapter Six, but they appear to represent the best classification that is currently available for nationwide data. As in the case of the regional context of the schools, we suspect that the use of these three categories will produce somewhat conservative estimates of the relationship between the modernization context of schools and their structure and functioning. Those differences in the organizational aspects of schools which we shall attribute to metropolitanizational differences (although rather striking) are nevertheless likely to underestimate the true differences which would obtain were metropolitanizational categories available which are more sensitive to distinctions in the degree of modernization.


SEATTLE
TACOMA
SPOKANE
PORTLAND
EUGENE
GREAT FALLS
BILLINGS
RENO
SACRAMENTO
SAN FRANCISCO OAKLAND
STOCKTON
SAN JOSE
FRESNO
BAKERSFIELD
SANTA BARBARA
LOS ANGELES LONG BEACH
SAN DIEGO
LAS VEGAS
SAN BERNARDINO-RIVERSIDE-ONTARIO
PHOENIX
TUCSON
OGDEN
SALT LAKE CITY
PROVO-OREM
DENVER
COLORADO SPRINGS
PUEBLO
ALBUQUERQUE
EL PASO
FARGO-MOORHEAD
DULUTH SUPERIOR
MINNEAPOLIS ST PAUL
SIOUX FALLS
SIOUX CITY
OMAHA
LINCOLN
TOPEKA
ST JOSEPH
KANSAS CITY
WICHITA
AMARILLO
LUBBOCK
WICHITA FALLS
ABILENE
ODESSA
MIDLAND
SAN ANGELO
TULSA
OKLAHOMA CITY
LAWTON
DALLAS
FORT WORTH
TEXARKANA
TYLER
WACO
AUSTIN
SAN ANTONIO
LAREDO
HOUSTON
GALVESTON-TEXAS CITY
BEAUMONT-PORT ARTHUR
CORPUS CHRISTI
BROWNSVILLE-HARLINGEN-SAN BENITO
FORT SMITH
LITTLE ROCK NORTH LITTLE ROCK
SHREVEPORT
MONROE
LAKE CHARLES
BATON ROUGE
NEW ORLEANS
SPRINGFIELD
ST LOUIS
DUBUQUE
WATERLOO
CEDAR RAPIDS
DES MOINES
DAVENPORT ROCK ISLAND MOLINE
GREEN BAY
MILWAUKEE
MADISON
KENOSHA
RACINE
ROCKFORD
CHICAGO
PEORIA
SPRINGFIELD
DECATUR
CHAMPAIGN URBANA
GARY HAMMOND EAST CHICAGO
SOUTH BEND
FORT WAYNE
MUNCIE
INDIANAPOLIS
TERRE HAUTE
EVANSVILLE
LOUISVILLE
LEXINGTON
MUSKEGON MUSKEGON HEIGHTS
GRAND RAPIDS
LANSING
KALAMAZOO
JACKSON
BAY CITY
SAGINAW
FLINT
DETROIT
ANN ARBOR
TOLEDO
LORAIN ELYRIA
CLEVELAND
LIMA AKRON
CANTON
STEUBENVILLE WEIRTON
WHEELING
COLUMBUS
SPRINGFIELD
DAYTON
HAMILTON-MIDDLETOWN
CINCINNATI
HUNTINGTON-ASHLAND
CHARLESTON
YOUNGSTOWN-WARREN
ERIE
PITTSBURGH
JOHNSTOWN
ALTOONA
HARRISBURG
YORK
LANCASTER
READING
ALLENTOWN BETHLEHEM EASTON
WILKES BARRE HAZLETON
SCRANTON
BINGHAMTON
BUFFALO
ROCHESTER
SYRACUSE
UTICA-ROME
ALBANY-SCHENECTADY-TROY
PITTSFIELD
HARTFORD
WATERBURY
NEW YORK
TRENTON
MERIDEN
NEW BRITAIN
NEW HAVEN
BRIDGEPORT
NORWALK
STAMFORD
PATERSON CLIFTON PASSAIC
JERSEY CITY
NEWARK
ATLANTIC CITY
WILMINGTON
PHILADELPHIA
BALTIMORE
WASHINGTON
LEWISTON AUBURN
PORTLAND
FITCHBURG LEOMINSTER
LOWELL
MANCHESTER
LAWRENCE HAVERHILL
SPRINGFIELD-CHICOPEE-HOLYOKE
BOSTON
BROCKTON
WORCESTER
FALL RIVER
NEW BEDFORD
PROVIDENCE-PAWTUCKET
NEW LONDON GROTON NORWICH
RICHMOND
ROANOKE
LYNCHBURG
NEWPORT NEWS HAMPTON
NORFOLK-PORTSMOUTH
WINSTON SALEM
GREENSBORO-HIGH POINT
DURHAM
RALEIGH
CHARLOTTE
ASHEVILLE
GREENVILLE
COLUMBIA
CHARLESTON
NASHVILLE
KNOXVILLE
CHATTANOOGA
MEMPHIS
HUNTSVILLE
GADSDEN
BIRMINGHAM
TUSCALOOSA
MONTGOMERY
ATLANTA
AUGUSTA
MACON
COLUMBUS
ALBANY
SAVANNAH
JACKSON
MOBILE
PENSACOLA
JACKSONVILLE
ORLANDO
TAMPA-ST PETERSBURG
WEST PALM BEACH
FORT LAUDERDALE-HOLLYWOOD
MIAMI
HONOLULU
SAN JUAN
MAYAGUEZ
PONCE
SCALE

Area Definitions by Federal Committee on Standard Metropolitan Statistical Areas under the direction of U.S. Bureau of the Budget.

DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

Figure 9-3. Standard Metropolitan Statistical Areas of the United States and Puerto Rico: 1960

According to our operational definition, approximately 30 percent of the 7,296 schools for which a metropolitanization assignment was possible are located in the highly modern context, 40 percent in the less modern context, and 30 percent in the least modern context (Table 9-4).[12]

As might be expected, metropolitanizational and regional contexts are associated within the SCS sample. Whereas in the least modern region (the Southeast) approximately 15 percent of the 986 schools are located in the most modern metropolitan area (i.e., in the central city), the corresponding percentage for the 2,038 schools in the most modern region (the Northeast) is approximately 33. Similarly, whereas in the Southeast approximately 70 percent of the schools are in non-metropolitan areas, in the Northeast it is only 20 percent (Table 9-4).

School-Community Social Class Context. The third and final sociocultural variable which we shall consider in the empirical portion of this report is the social class composition of the school's immediate environment. We shall refer to this as "school-community social class," or more briefly as "social class."

As was noted in Chapter Seven, this has been an important variable in past research in the sociology of education and has recently assumed additional theoretical and substantive interest.[13] To measure it, we chose to rely upon an item in the School Questionnaire (See Appendix B, Item 5p) which asked the principal to estimate the percent of pupils in his school who "have a father (or guardian) who is a white collar worker (professional, managerial, clerical, sales worker, etc.)." In so doing, we were well aware that such estimates are subject to errors in terms of both their validity and their reliability--all school principals may not adequately understand such terms as "professional, managerial, clerical, sales, etc.," and even when they do understand them, they may not have sufficient information to offer reliable estimates. Nevertheless, this approach has been used successfully before, and there is no systematic evidence that it yields results any less valid or reliable than such alternative approximations as the aggregation of pupil reports of their father's occupation, or the use of data from census tracts which only roughly correspond to a school's attendance district.[14] Considerable support for our confidence in the school principals as estimators of the percent of fathers in white-collar occupations can also be noted in Appendix D. There, we have documented by region and metropolitan areas, the correspondence of the principals' occupational estimates for the fathers of all pupils in their school with the Census Bureau's reports for a sample of these pupils.

In accordance with the reasoning introduced in Chapter Seven, we shall consider schools having a high percentage of fathers in white-collar (WC) occupations as being located in highly modern contexts and those with fewer fathers in such occupations as being located in less modern contexts. Initially, we shall divide the social class context distribution into four empirical quarters (0-19% WC, 20-34%, 35-59%, and 60-100%),

Table 9-4. Distribution of SCS Sample of Public and Private Schools, by Regional and Metropolitanizational Contexts.

Metropolitanizational Context	Regional Context					All Regional Contexts
	South-east	Plains	Great Lakes	West	North-east	
Metropolitan-Central City	146	489	455	425	662	2177
Metropolitan-Ring	152	685	532	603	958	2930
Non-Metropolitan	688	745	46	292	418	2189
All Metropolitanization Contexts	986	1919	1033	1320	2038	7296

but at most points in our analysis these will be collapsed into only two categories (0-34% WC, and 35-100%) divided at the median of the empirical distribution across all schools. Because of the problems of validity and reliability noted above, this variable very likely also produces conservative estimates of the relationship between the modernization contexts of schools and their organizational characteristics. As in the case of regional and metropolitanizational contexts, that variation in the structure and functioning of schools which we attribute to their social class contexts is likely to underestimate the true variation which is so attributable.

As might be expected from previous research, there is considerable variation in the social class context of American schools.[15] The mean percent of fathers reported to be in white-collar occupations (for the 7,012 schools from which such reports were obtained) is 38.5 percent (Table 9-5). However, this variable is somewhat skewed. Although approximately 35 percent of the schools have fewer than 25 percent fathers in white-collar occupations, those with 75 percent or more in such occupations number only 15 percent (Table 9-5). For the median school the percent of fathers in white-collar occupations is just under 35.

As in the case of the metropolitan context of schools, the social class context is also associated with the school's regional context. Whereas in the least modern region (i.e., the Southeast) the average school has 29 percent of the fathers in white-collar occupations, in the most modern region (the Northeast) the corresponding percentage is 41 (Table 9-5).

Racial Composition and Modernization Contexts

During the past decade, there has been considerable attention focused on the racial composition of public schools as an important determinant of educational opportunity.[16] However, although correlated with important indicators of modernization, racial considerations are not in any sense rational components of the modernization process. What validity they have as predictors of educational opportunity appears to lie primarily in their association with more rational (particularly social class) components of the sociocultural contexts of schools.[17]

Therefore, although we have data on the racial composition of most of the 7,771 public and private schools in the SCS sample, we will not utilize this variable as a theoretically important independent variable in exploring the effects of the modernization context of schools on their organizational characteristics and functioning. (We have, however, provided some detailed tabulations involving this variable in Appendix C). But, before considering our major analyses, it is important to note carefully the association of the racial composition of schools with their regional, metropolitanizational, and social class contexts. In this way the degree to which these variables are intertwined empirically can be recorded and can be reconsidered in Chapter Fourteen when we draw implications from our results.

Table 9-5. Distribution of SCS Sample of Public and Private Schools, by Regional and School-Community Social Class Contexts.

School-Community Social Class Context (Per Cent of Fathers in White-Collar Occupations)	Regional Contexts					All Regional Contexts
	South-east	Plains	Great Lakes	West	North-east	
95-100%	16	52	46	32	56	202
90-94	17	49	27	35	43	171
85-89	10	35	17	20	48	130
80-84	20	68	29	51	68	236
75-79	28	68	52	73	67	288
70-74	21	56	31	70	72	250
65-69	11	32	22	22	48	135
60-64	48	84	57	105	117	411
55-59	6	22	16	17	40	101
50-54	50	158	84	120	178	590
45-49	12	33	22	18	39	124
40-44	51	146	78	102	182	559
35-39	30	66	32	43	73	244
30-34	60	141	83	122	171	577
25-29	86	166	73	86	162	573
20-24	110	204	100	91	166	671
15-19	83	102	55	62	86	388
10-14	105	183	82	91	142	603
05-09	105	117	48	59	89	418
00-04	122	101	44	34	40	341
All Social Class Contexts	991	1883	998	1253	1887	7012
Mean	28.9	37.0	40.4	42.7	41.3	38.5
Standard Deviation	25.2	26.4	27.0	25.9	25.3	26.3

The schools in the five regions differ greatly in the percent of their pupils reported by the principal to be Negro.[18] Whereas for the total of 7,496 schools in the sample reporting on this variable, the average is 10 percent, for those schools in the least modern region (the Southeast) it is 18 percent, and for those in the most modern region (the Northeast) it is 8 percent (Table 9-6). However, the relationship is by no means monotonic. The average school in the Great Lakes region has a higher percentage of Negro pupils than does the average school in the Plains, and in the West the average school has the smallest proportion of Negro pupils. What is particularly noteworthy is the location of schools which are exclusively Negro. Of the 258 exclusively Negro schools in the SCS sample, 156 are in the Southeast, 80 in the Plains, 13 in the Great Lakes, 9 in the Northeast, and none in the West (Table 9-6). Clearly, the racial composition and regional context of schools are correlated, and we will need to take this into account in assessing the implications of our findings.

The schools in the three metropolitanizational areas also differ greatly in their racial compositions. In general, the average school with the greatest proportion of Negro pupils (20 percent) is found in the central city and that with the least (5 percent) is found in the ring. Furthermore, racially integrated schools are found most frequently in the central cities, somewhat less frequently in the rings, and least in the non-metropolitan areas (Table 9-7).

By far the strongest association between the modernization context of schools and their racial compositions is with respect to the social class of the school-community. Whereas in the least modern social class context (that with less than 20 percent of the fathers in white-collar occupations) the average school contains approximately 22 percent Negro pupils, in the most modern context (that with 60 percent or more fathers in white-collar occupations) the corresponding percentage is less than three (Table 9-8). This relationship is particularly noticeable at the extremes. Of the 243 schools which are reported to be exclusively Negro, 192 are in the least modern social class context, 36 in the next more modern context, 11 in the next and only four in the most modern social class context (Table 9-8).

School Type by Modernization Contexts

As a preview of the analyses of public schools which occur in subsequent chapters, it may be helpful to consider briefly some specimen differences among different types of public and private schools which vary in their modernization contexts. The 7,734 schools in the SCS sample which can be identified by type vary in the type of control under which they are financed and administered as well as in their organizational patterns. For example, approximately 82 percent are public schools, 16 percent are under Roman Catholic control, 1 percent church related, but non-Catholic, and 1 percent neither public, Catholic, nor other Church

Table 9-6. **Distribution of SCS Sample of Public and Private Schools, by Regional and School-Community Racial Contexts.**

School-Community Racial Context (Per cent of Pupils who are Negro)	Regional Context					All Regional Contexts
	South-east	Plains	Great Lakes	West	North-east	
100%	156	80	13	--	9	258
96-99	3	38	38	17	32	128
90-95	2	11	16	10	8	47
85-89	--	4	4	5	2	15
80-84	1	--	6	8	7	22
75-79	--	4	2	4	3	13
70-74	--	3	3	4	4	14
65-69	--	4	2	2	3	11
60-64	--	1	5	4	7	17
55-59	--	3	1	3	5	12
50-54	--	2	12	8	21	43
45-49	1	5	8	2	11	27
40-44	--	8	3	3	17	31
35-39	--	5	9	8	14	36
30-34	3	11	15	8	52	89
25-29	4	13	6	11	32	66
20-24	4	16	12	12	38	82
15-19	24	28	21	21	52	146
10-14	41	87	30	49	100	307
05-09	81	105	44	81	172	483
01-04	312	543	263	565	760	2443
00	392	994	540	529	751	3206
All Racial Contexts	1024	1965	1053	1354	2100	7496
Mean	17.9	9.6	11.3	6.4	8.2	10.0
Standard Deviation	35.8	25.4	26.3	17.9	18.7	24.7

Table 9-7. Distribution of SCS Sample of Public and Private Schools, by Metropolitanizational and School-Community Racial Contexts.

School-Community Racial Context (Per cent of Pupils who are Negro)	Metropolitanizational Context			All Metropolitanizational Contexts
	Non-Metro	Ring	Central City	
100%	115	36	91	242
96-99	1	10	111	122
90-95	3	4	39	46
85-89	--	4	11	15
80-84	--	1	20	21
75-79	2	4	6	12
70-74	--	1	12	13
65-69	--	2	9	11
60-64	--	2	12	14
55-59	1	4	7	12
50-54	--	8	31	39
45-49	1	3	21	25
40-44	4	6	17	27
35-39	1	11	23	35
30-34	9	21	56	86
25-29	13	17	32	62
20-24	5	22	47	74
15-19	35	41	52	128
10-14	75	87	128	290
05-09	136	159	152	447
01-04	657	993	628	2278
00	1064	1428	565	3057
All Racial Contexts	2122	2864	2070	7056
Mean	7.7	4.5	19.9	10.3
Standard Deviation	23.1	15.0	32.0	24.4

Table 9-8. Distribution of SCS Sample of Public and Private Schools, by School-Community Social Class and Racial Contexts.

School-Community Racial Context (Per cent of Pupils who are Negro)	Social-Community Social Class Context (Per cent of Fathers in White Collar Occupations)				All Social Class Contexts
	0-19%	20-34%	35-59%	60-100%	
100%	192	36	11	4	243
96-99	73	26	14	5	118
90-95	26	12	2	3	43
85-89	8	4	--	--	12
80-84	9	5	1	1	16
75-79	6	2	4	--	12
70-74	9	2	2	1	14
65-69	6	2	1	1	10
60-64	9	4	1	1	15
55-59	4	4	1	1	10
50-54	19	8	11	--	38
45-49	8	5	5	5	23
40-44	3	11	9	3	26
35-39	7	15	4	2	28
30-34	28	26	13	5	72
25-29	15	16	12	13	56
20-24	16	25	16	11	68
15-19	43	34	31	23	131
10-14	60	93	77	36	266
05-09	96	125	124	109	454
01-04	358	578	616	719	2271
00	735	766	639	843	2983
All Racial Contexts	1730	1799	1594	1786	6909
Mean	22.2	8.6	5.5	2.9	9.8
Standard Deviation	37.4	21.7	15.4	9.9	24.7

related (Table 9-9). Within the two major types of control (public and Roman Catholic) there exists a variety of organizational patterns indicative of different degrees of specialization. Roughly 25 percent of all the schools in the SCS sample can be classified as public elementary, 19 percent as public senior high schools, and 15 percent as public junior high schools (Table 9-10). Approximately 7 percent are elementary-junior high schools, 4 percent junior-senior high schools, and 4 percent "unspecialized" (i.e., containing grades K-12 or 1-12). Within the senior high schools, it is interesting to note that although the public schools are rather evenly divided between those which contain grades 9-12 and those which contain grades 10-12, with only one exception, all Catholic senior high schools in the SCS sample contain grades 9-12. Furthermore, the most frequent grade structure within the 6,333 public schools of the SCS sample appears to be the 6-3-3 arrangement, but it encompasses only 32 percent of these public schools (Table 9-10).[19]

Not only does the type of control and organizational pattern of schools differ overall, but they also differ according to the modernization context in which the school is located. In Chapter Ten we will examine this phenomenon in greater detail with respect to selected types of public schools. However, as a background to these later analyses, it can be helpful to examine how the organizational pattern of both public and Catholic schools varies with the three modernization context variables.

Zero-order Association. When school type is examined by the regional context of the school, several important associations can be noted. For example, particularly noteworthy is the fact that the percentage of schools in each region which are Catholic varies from a high of 23 percent in the Great Lakes region to a low of 4 percent in the Southeast (Table 9-11). Of further interest is the fact that the proportion of public schools which are structurally unspecialized (i.e., contain grades K-12 or 1-12) varies systematically from a high of 13 percent in the Southeast to a low of 2 percent in the West (Table 9-11).

Variations in school type by metropolitanizational context are even more striking. For example, in the central city the percentages of schools in the SCS sample which are Catholic is 23, whereas in the ring and the non-metropolitan areas, it is 16 and 7 percent, respectively. The percent of unspecialized schools also varies in a similar systematic fashion, with less than 1 percent of the public schools in the central cities being unspecialized, 2 percent in the ring, but 12 percent in non-metropolitan areas (Table 9-12).

Variations in the type of control by the social class context of the school take on a slightly different pattern. For example, whereas the proportion of Catholic secondary schools decreases consistently from a high of 8 percent to a low of 2 percent as the social class context of the school falls, the corresponding percentages for Catholic elementary schools

Table 9-9. Frequency and Percentage Distributions of Schools, by Type of Control.

Type of Control	Number	Per Cent
Public	6,333	81.9%
Private		
Roman Catholic	1,212	15.7
Non-Catholic, church related	95	1.2
Non-Catholic, Non-church related	94	1.2
All Types	7,734	100.0%

Table 9-10. Frequency and Percentage Distributions for 7734 Public and Private Schools, by Type and Subtype of School Organization.

School Organization		Number		Per Cent	
Type	Subtype	Subtype	Type	of Type	of Total
Public	Elementary		1981		25.6%
	K-6	1262		63.8%	
	1 -6	575		29.0	
	K-5	102		5.1	
	1 -5	42		2.1	
Public	Elementary – Junior High		553		7.2
	K-9	32		5.8	
	1 -9	28		5.1	
	K-8	204		36.9	
	1 -7	183		33.1	
	K-7	40		7.2	
	1 -7	66		11.9	
Public	Junior High		1129		14.6
	8-9	4		0.4	
	7-9	848		75.1	
	7-8	192		17.0	
	6-9	15		1.3	
	6-8	70		6.2	
Public	Junior-Senior High				
	7-12		314		4.1
Public	Senior High		1495		19.3
	10-12	708		47.4	
	9-12	787		52.6	
Public	Unspecialized		339		4.4
	K-12	171		50.4	
	1 -12	168		49.6	

Table 9-10. Continued

School Organization		Number		Per Cent	
Type	Subtype	Subtype	Type	of Type	of Total
Catholic	Elementary-Junior High		714		9.2%
	K-6	3		0.4%	
	1-9	5		0.7	
	K-8	183		25.6	
	1-8	500		70.0	
	K-7	3		0.4	
	1-7	4		0.6	
	K-6	4		0.6	
	1-6	7		1.0	
	K-5	1		0.1	
	1-5	4		0.6	
Catholic	Senior High		344		4.4
	10-12	1		0.3	
	9-12	343		97.7	
Miscellaneous			866		11.2
	Other Public	528		60.6	
	Private, Other Catholic	154		17.7	
	Private, Other Church	95		10.9	
	Private, Not Church Related	94		10.8	
All Types			7734		100.0%

Table 9-11. Percentage Distribution of Type of School, by Regional Context.

Regional Context	Type of School								Number of Schools
	Private						Catholic		
	E	EJ	J	JS	S	U	EJ	S	
Northeast	27.1	5.0	15.2	6.2	21.4	2.9	15.0	7.2	1905
West	33.9	5.7	20.9	1.2	27.8	1.6	6.1	2.8	1291
Great Lakes	26.3	7.7	17.4	2.2	20.0	3.1	15.1	8.2	966
Plains	29.7	7.7	15.9	5.4	20.6	6.4	9.9	4.4	1812
Southeast	26.1	10.0	12.7	6.9	18.2	13.1	2.7	1.3	895
All Contexts	28.8	8.1	16.4	4.6	21.8	4.9	10.4	5.0	6869

Table 9-12. Percentage Distribution of Type of School, by Metropolitanizational Context.

Metropolitanization Context	Type of School								Number of Schools
	Public						Catholic		
	E	EJ	J	JS	S	U	EJ	S	
Central City	30.9	6.6	17.7	2.3	18.7	0.9	16.4	6.5	1963
Ring	30.4	6.0	18.6	4.2	23.3	1.9	10.6	5.0	2557
Non-Metro.	29.0	13.7	12.2	7.0	19.2	12.4	5.0	1.5	1899
All Contexts	30.2	8.5	16.4	4.4	20.7	4.7	10.7	4.4	6439

are relatively uniform. The proportion of public schools in the different social class contexts which are unspecialized consistently varies from a low of approximately 1 percent in the high social class context category to a higher of 12 percent in the low (Table 9-13).

Higher-order Associations. In the previous sections of this chapter we have examined the frequency with which schools have been located in each of three modernization contexts--defined in terms of the region in which the school is located, its metropolitanization area, and the social class composition of its immediate school-community. We have also noted how the type of control and organizational pattern of schools also varies with each of these context variables. However, it has been apparent throughout this examination that the three context variables are not statistically independent of each other, and thus that differences which at first appear attributable to regional effects, might in fact, be the result of metropolitanizational or social class effects. Therefore, when testing our working hypothesis, it is important to consider the three contexts simultaneously.

To accomplish this task within the limits of the number of data cases available for analysis, we have generally collapsed the five original regional contexts into two more general contexts by combining the Northeast, West, and Great Lakes and defining them as the "more modern" region, and the Plains and Southeast and defining them as the "less modern" region. Similarly, the four original social class context categories have been collapsed into two more general categories by combining the high and moderately high groups and calling them both "high," and the low and moderately low groups and calling them both "low." However, because of some rather distinctive properties of the three metropolitanization categories which will become apparent in Chapter Twelve, we have not collapsed this variable.

In general, when in Chapters Ten, Eleven, and Twelve, we examine the effects of the modernization context of schools upon their structure and functioning, we will utilize these two regional, three metropolitanizational, and two social class contexts in combination. Some idea of the association of these three context variables can be observed in Table 9-14. There the observed distribution of the 6,613 schools which were codeable on all three variables can be compared with the distribution which would be expected if the three variables were statistically independent (i.e., uncorrelated). What is clearly apparent is that in the more modern region (as compared with the less modern region) schools are located more frequently in central city and ring than would be expected under an assumption of statistical independence and less frequently in the non-metropolitan areas. In addition, within the less modern regional context, schools in the low social class context occur far more frequently

Table 9-13. Percentage Distribution of Type of School, by School-Community Social Class Context.

School Community Social Class Context	Type of School								Number of Schools
	Public						Catholic		
	E	EJ	J	JS	S	U	EJ	S	
High	32.3	4.0	19.4	2.5	21.5	0.9	11.9	7.5	1580
Moderately High	23.4	5.8	20.1	4.7	26.3	2.6	10.0	7.1	1434
Moderately Low	27.6	7.7	15.9	5.9	25.2	5.0	8.9	3.8	1630
Low	32.7	14.9	10.7	5.6	12.6	12.2	9.8	1.5	1568
All Contexts	29.1	8.1	16.5	4.7	21.4	5.2	10.1	4.9	6212

Table 9-14. Expected and Observed Frequency Distributions of SCS Sample of Public and Private Schools across Twelve Sociocultural Context Categories.

Sociocultural Context				
Region	Metropolitanization	Social Class	Expected[a]	Observed
More Modern	Central City	High	548	640
		Low	570	677
	Ring	High	776	1187
		Low	807	710
	Non-Metro.	High	592	294
		Low	616	399
Less Modern	Central City	High	379	299
		Low	395	275
	Ring	High	537	462
		Low	559	322
	Non-Metro.	High	409	360
		Low	427	988
All Contexts			6613	6613

[a] Expected under an assumption of statistical independence among the three sociocultural contexts.

in the non-metropolitan areas than would be expected if the three context variables were statistically independent and far less frequently in the central city and ring. In the more modern region, schools in the high social class context occur more frequently in the ring and central city than would be expected and less frequently in the non-metropolitan areas (Table 9-14).

However, in spite of such associations between the three modernization context variables, the relationship between type of school organizational pattern and modernization context reported in Tables 9-11, 9-12, and 9-13 persist when the three context variables are introduced simultaneously. Particularly interesting is the pattern with respect to the unspecialized public schools. For five of six possible comparisons between the more and less modern regions (those made while holding constant both the social class and metropolitanization contexts) the proportion of public unspecialized schools is greater in the less modern region than it is in the more modern one. For three of four possible comparisons among the central city, the ring, and non-metropolitan areas (holding constant both regional and social class contexts) the central city has the smallest proportion of unspecialized schools, the ring the next and non-metropolitan area the most. And for five of six possible comparisons between the high and low social class contexts (holding constant both regional and metropolitanizational context), the low context has a greater proportion of unspecialized schools than does the high context (Table 9-15). In each case the exceptions are rather minor.

Summary

In this chapter we have introduced data which we will use in conducting a preliminary test of the working hypothesis offered in Chapter Eight. These data were collected in 1965 by the U. S. Bureau of the Census as a minor part of the Equality of Educational Opportunity survey of the U. S. Office of Education. Approximately 8,000 public and private schools representing a variety of organizational patterns are included.

These schools have been described in terms of the three modernization contexts (region, metropolitanism, and social class) which will form the independent variables of the subsequent analyses. In addition, they have been described in terms of their racial compositions.

A brief examination of variations in the type of control and organizational arrangements of American schools associated with their sociocultural contexts has been presented. This description was designed primarily as an introduction. What it suggests is that the organizational structure and functioning of American schools varies with each of the three modernization context variables, taken both singly and in combinations. In the three following chapters we will explore this predicted association in greater detail and with a more sophisticated form of analysis which will be introduced in Chapter Ten.

Table 9-15. Percentage Distributions of Type of School, by Twelve Sociocultural Context Categories.

Sociocultural Context			Type of Public School								Number of Schools
			Public						Catholic		
Region	Metropolitanization	Social Class	E	EJ	J	JS	S	U	EJ	S	
More Modern	Central City	High	25.8	6.8	18.9	1.6	19.4	0.4	16.8	10.6	578
		Low	33.3	8.0	15.7	1.4	16.8	0.3	19.2	5.3	625
	Ring	High	29.2	4.1	21.0	3.8	24.0	0.8	10.7	6.5	1034
		Low	32.8	6.6	15.9	4.2	24.1	3.9	9.4	3.0	635
	Non-Metro.	High	29.3	3.5	22.4	6.2	23.9	2.7	8.1	3.9	259
		Low	34.0	8.1	11.3	7.8	19.5	12.5	4.9	1.7	344
Less Modern	Central City	High	35.0	2.7	18.8	2.7	19.6	1.9	11.5	7.7	260
		Low	39.0	7.0	19.9	4.6	13.7	2.1	12.9	0.8	241
	Ring	High	27.8	6.0	18.4	3.5	22.6	1.2	12.9	7.7	403
		Low	32.3	12.4	16.5	7.6	17.9	3.4	9.3	0.7	291
	Non-Metro.	High	32.2	8.3	19.6	2.7	24.9	5.0	5.0	2.3	301
		Low	25.9	20.6	7.2	8.1	15.4	18.5	3.6	0.7	876
All Contexts			30.4	8.5	16.5	4.4	20.2	4.9	10.5	4.5	5847

Notes and References (9)

1. The results of this survey are presented in James S. Coleman, *et al.*, *Equality of Educational Opportunity*, Vols. 1 and 2 (Washington, D. C.: U. S. Government Printing Office, 1966).

2. Charles B. Nam, A. Lewis Rhodes, and Robert E. Herriott, *Inequalities in Educational Opportunities: A Demographic Analysis of Educational Differences in the Population* (Tallahassee, Fla.: Florida State University, 1966), Section B-F. This report has been summarized in Coleman, *et al.*, *op. cit.*, Chapter 6.

3. For a general discussion of the Current Population Survey, see Daniel B. Levine and Charles B. Nam, "The Current Population Survey," *American Sociological Review*, 27 (1962), pp. 585-590; or U. S. Bureau of the Census, "The Current Population Survey: A Report on Methodology," *Technical Report No. 7*, 1963.

4. For a preliminary analysis of these data, see A. Lewis Rhodes, *Effects of Parental Expectations on Educational Plans of White and Nonwhite Adolescents*, U.S.O.E. Contract No. OEC 2-7-001790-2023 (Washington, D. C.: Department of Health, Education and Welfare, 1968).

5. For a listing of response rates by census regions and size of place, see Appendix A, Table A-1. A more extensive analysis of responding and non-responding schools is also presented in Appendix A. It supports our assumption that the responding schools are an adequate representation of all schools by both region and metropolitan area.

6. The *School Questionnaire*, along with a brief discussion of its design and administration, are discussed in Appendix B.

7. For a definition of the states included in both the SCS region and the more ideal alternative, see Table 9-1.

8. We estimate that when, as will be done in Chapters Ten through Twelve, we combine SCS regions A, B, & C as "more modern" and D & E as "less modern" we will capture only 93% of the differences which would be attributable to region were we to use a similar combination of the ideal alternative presented in Table 9-1. Using the SCS regions, one can compute from Table 9-1 a modernization score (weighed by state population figures) for the more modern region of 3.90 and for the less modern region of -1.84. The difference is 5.74 units. Similarly, using the more ideal alternative, the modernization score of 3.82 for the more modern region is 6.20 units different from that of -2.38 for the less modern region. The ratio of the difference between the SCS modernization scores for these two regions and that for the more ideal alternative is .926.

9. See, for example, Otis Dudley Duncan, *et al.*, *Metropolis and Region* (Baltimore: The Johns Hopkins University Press, 1960).

10. U. S. Bureau of the Census, *U. S. Census of Population: 1960*, Vol. I, *Characteristics of the Population, Part A. Number of Inhabitants* (Washington, D. C.: U. S. Government Printing Office, 1961), pp. xxiii-xxvii; also Bureau of the Budget, *Standard Metropolitan Statistical Areas* (Washington, D. C.: U. S. Government Printing Office, 1961).

11. Those 475 schools for which an unambiguous assignment could not be made have been deleted from all analyses and tables involving the metropolitanizational context variable.

12. We know of no way to compare these sample results with population figures since neither the Bureau of the Census nor any other agency tabulates the number of *schools* by SMSA categories. The corresponding percentage for *pupils* in 1965 (estimated from CPS data) were SMSA-Central City, 35.8 percent; SMSA-Ring, 35.8 percent; and non-SMSA, 28.3 percent. Due to the known correlation of school size with community size, such figures suggest that the SCS sample is over-representative of central city schools and under-representative of non-SMSA schools. However, for reasons discussed in Appendix A, whatever bias is introduced by either sampling or non-response errors is most likely a conservative one.

13. See, for example, James B. Conant, *Slums and Suburbs* (New York: McGraw-Hill Book Co., Inc., 1961); Patricia Sexton, *Education and Income* (New York: The Viking Press, 1961); Ralph H. Turner, *The Social Context of Ambition* (San Francisco: Chandler Publishing Co., 1964); Robert E. Herriott and Nancy Hoyt St. John, *Social Class and the Urban School* (New York: John Wiley and Sons, Inc., 1966).

14. See, for example, Herriott and St. John, *op. cit.*, pp. 15-22.

15. For earlier data on public schools in cities with populations of 50,000 or greater, see *Ibid.*, p. 21.

16. See, for example, Coleman, *et al.*, *op. cit.*, and U. S. Commission on Civil Rights, *Racial Isolation in the Public Schools*, Vols. I and II (Washington, D. C.: U. S. Government Printing Office, 1967).

17. See, for example, U. S. Commission on Civil Rights, *op. cit.*, Vol. II, pp. 182-186.

18. See Appendix B, *School Questionnaire*, Item 5i for the specific wording of our question. Unlike the case of school-community social class, there seems to be little disagreement regarding the ability of school principals to estimate the racial compositions of their schools. Our confidence in this estimate is supported by our analysis of such reports (see Appendix D).

19. Unfortunately, it is not possible to deduce from Table 9-10 exactly what system wide grade arrangement plan each school is part of. The estimate of 32 percent was obtained by including all 10-12 schools (9.1 percent of the total SCS public sample of 6,333 schools), all 7-9 schools (9.8 percent), and all K-6 or 1-6 schools (21.3 percent), minus a figure corresponding to the number of 7-12 schools (5.0 percent), plus the number of 7-8 schools (2.9 percent). This latter adjustment is a conservative one and was designed to correct for the fact that many K-6 and 1-6 schools are part of 6-6, or 6-2-4 rather than 6-3-3 systems.

Chapter Ten. Modernization Context and the Organizational Structure of American Public Schools

In Chapter Four we discussed at length a conceptualization of the American public school as an open social system highly dependent upon its environmental setting. In Chapters Five, Six and Seven we identified three major sociocultural contexts of this environment (region, metropolitanization, and school-community social class) each of which, it was argued, varies in its degree of modernity. Chapter Eight developed and defended the working hypothesis that the more modern the sociocultural context of American public schools, the more modern their organizational structure and functioning.

This chapter focuses upon one aspect of education believed to be influenced by the general relationship hypothesized between the modernity of an environment and the school as a social organization--the structure of the organization. Essentially, we would anticipate that structural variation in educational organizations would be systematically related to the differential modernization of the social contexts in which the school exists.

There are many characteristics of organizational structure which, if our earlier discussions are correct, could be influenced by the degree of modernization of the social context. Given our interests in the institutional role of education in modern society, as well as the limitations imposed by a secondary analysis, we have selected organizational size and specialization as the two structural characteristics to be considered. Specifically, we would expect that both larger size and greater specialization in the school would be related to the degree of modernity in the social context. If any one of the three sociocultural context variables bears a non-random independent association with either of the two measures of organizational structure, we shall claim support for our working hypothesis. However, we shall also be alert for interaction effects among the three sociocultural context variables.

Modernization Context and Organizational Size

As noted in Chapter Two, modernization includes, among other things, an emphasis upon specialization and rationality oriented toward the most efficient utilization of resources. Thus, the emergence of a bureaucratic structure associated with education in modern societies can be at least partially explained in terms of meeting the specialized manpower requirements of those societies. While there is good reason to doubt that *unlimited* organizational size contributes to such ends, it is also true that larger organizational size permits a degree of bureaucratic efficiency not available to smaller organizations. Accordingly, other factors being equal, we would expect that schools in the more modern social context would be larger than schools in the less modern social context. However, while organizational bureaucracy is frequently associated with largeness, it does not necessarily follow that a large school organization is specialized. Since we have chosen to examine the influence of modernization upon both school size and school specialization, it may be useful to consider briefly the nature of the relationship of these two distinct structural characteristics.

In our general discussion of differentiation of open sociocultural systems in Chapter Three, the ambiguous relationship of size to differentiation was noted. Whether or not education as a type of activity reflects this relationship in its structural development is also unclear. Given the absence of empirical evidence to the contrary, it seems reasonable to assume that school size is a structural characteristic imperfectly related to differentiation as we have discussed it in Chapter Four. Thus, a small school may incorporate grades K-12, while a large school may include only grades 10-12. Or, a large school may have a curricular program which calls for teachers to be "generalists," while a small school may encourage subject matter specialization on the part of the faculty. Therefore, while we expect school size to play some part in school differentiation, we would not expect the relationship to be perfect. Size, then, is viewed here as a structural characteristic of the organization distinct from its degree of specialization.

In order to test our expectations regarding the association of size and modernization, we have related the number of full-time faculty members assigned wholely to each school (as reported by the school principal) to the three modernization contexts of region, metropolitanization and social class introduced in Chapter Nine. We have done this for these contexts both singly and in combination. In addition, we have performed all analyses separately within each of three types of public schools--those which in Chapter Nine we have defined as elementary, junior high, and senior high schools (see Table 9-10).

Such a distinction in type of school is important for several reasons. In the first place, type of school is itself related to organizational size (elementary schools tend to be smaller than junior high schools which tend to be smaller than senior high schools). By controlling on type of school, we can remove this additional structural effect from our consideration of the effects of sociocultural contexts on organizational size. In addition, by treating the three major types of public schools separately, we can examine whether the effects of the sociocultural contexts on organizational size vary among the different types of schools.

Zero-order effects. As might be expected, the mean organizational size of the three major types of public schools in the SCS sample varies greatly. The average of the 1,951 elementary schools contains 21.2 full-time teachers, whereas that for the 1,102 junior high schools contains

44.9, and that for the 1,461 senior high schools 71.8 (Table 10-1). However, within each type of school organization, size varies systematically with each of the three modernization contexts. Consider first the 1,461 senior high schools. Whereas the average senior high school in the least modern region contains 43.6 full-time teachers, that in the most modern region contains 87.5; whereas the senior high school in the least modern metropolitan area contains 43.0 teachers, that in the most modern metropolitan area contains 95.8; whereas the average senior high school in the least modern social class context contains 50.2 full-time teachers, that in the most modern social class context contains 80.5. Similar differences can be noted with respect to the junior high schools and the elementary schools. However, in the case of the elementary schools, the differences are much smaller, and often not as consistent as in the case of the junior and senior high schools (Table 10-1).

Higher-order effects. These differences between the modernization contexts of schools and their organizational size persist when two contexts are considered simultaneously. After collapsing the regional context into the two categories introduced in Chapter Nine, it can be noted that for all three metropolitanizational context categories of all three types of schools, the average school in the more modern region contains more full-time teachers than that in the least modern region (Table 10-2). Similarly, for each of the two regional categories within each of the three types of schools, the average school in the central city contains more full-time teachers than does that in the ring than does that in the non-metropolitan areas (Table 10-2).

When the social class context of schools is dichotomized and reintroduced into the analysis in conjunction with the regional and metropolitanizational contexts, the same consistent pattern can be observed. Within all three types of public schools, under all forms of cross-classification, and with only a few rare exceptions to be noted below, the more modern the regional context the larger the school, the more modern the metropolitanizational context the larger the school, and the more modern the social class context the larger the school (Table 10-3).

In order to summarize the independent and joint effects of each of the three modernization context variables on the organizational size of American public schools, a least squares regression analysis was performed using "dummy" main effects and interaction terms and pivoted on the least modern sociocultural context.[1] Such an approach attempts to fit the data upon which Table 10-3 is based to a systematic statistical model. The coding of the data into dummy variables necessary for the execution of such an analysis is presented in Table 10-4. There it can be seen that the most modern regional context has been coded as "1" and the least modern as "0." Similarly, the most modern social class context category has been coded as "1" and the least modern as "0." In the case of the

Table 10-1. Mean Organizational Size,* by Type of Public School and Three Sociocultural Context Variables.

Sociocultural Context Variable	Type of Public School					
	Elementary		Junior High		Senior High	
	Mean	N	Mean	N	Mean	N
All Contexts	21.2	1951	44.9	1102	71.8	1461
Region:						
Northeast	24.1	506	54.0	284	87.5	398
West	20.8	434	45.9	262	74.9	350
Great Lakes	21.0	249	43.9	167	76.0	189
Plains	19.8	529	39.4	278	61.8	365
Southeast	18.6	233	34.1	111	43.6	159
Metropolitanization:						
Central City	25.5	598	56.9	343	95.8	361
Ring	20.8	771	43.0	467	72.9	586
Non-Metropolitan	16.5	545	31.3	226	43.0	354
School-Community Social Class:						
High	21.7	504	47.6	299	80.5	338
Moderately High	20.8	329	43.9	282	73.2	367
Moderately Low	21.1	443	41.7	254	64.2	403
Low	20.5	509	42.2	167	50.2	192

*As measured by the number of full-time teachers

Table 10-2. Mean Organizational Size,* by Type of Public School, Metropolitanizational and Regional Contexts.

Metropolitanizational Context	Regional Context			
	Less Modern		More Modern	
	Mean	N	Mean	N
Senior High Schools:				
Central City	75.5	93	102.8	268
Ring	70.5	151	73.7	435
Non-Metropolitan	36.6	217	52.9	137
Junior High Schools:				
Central City	47.2	107	61.3	236
Ring	40.4	125	44.0	342
Non-Metropolitan	28.4	128	35.0	98
Elementary Schools:				
Central City	23.0	199	26.7	399
Ring	21.0	213	20.6	558
Non-Metropolitan	16.2	337	16.9	208

*As measured by the number of full-time teachers

Table 10-3. Mean Organizational Size,* by Type of Public School and Twelve Sociocultural Context Categories.

Sociocultural Context			Type of Public School					
Region	Metropolitanization	Social Class	Elementary		Junior High		Senior High	
			Mean	N	Mean	N	Mean	N
More Modern	Central City	High	23.6	146	57.6	105	105.1	110
		Low	28.8	202	64.6	95	93.7	99
	Ring	High	21.6	292	46.0	209	77.4	243
		Low	19.6	202	38.2	100	64.2	148
	Non-Metro.	High	18.7	74	40.3	56	59.1	61
		Low	16.3	115	27.2	37	46.4	65
Less Modern	Central City	High	21.5	82	45.9	45	78.5	47
		Low	24.0	93	48.1	47	72.1	33
	Ring	High	21.7	110	43.1	73	73.1	89
		Low	20.2	90	35.7	48	60.9	51
	Non-Metro.	High	18.2	94	31.4	57	43.4	71
		Low	15.7	224	25.8	61	32.9	133
	All Contexts		21.0	1724	44.4	933	68.6	1150

*As measured by the number of full-time teachers

Table 10-4. Definition of Dummy Sociocultural Context Main and Interaction Effect Variables.

Original Variable			Dummy Variable	
Variable	Category	Symbol	Value	Interpretation
Main Effects:				
Region	More Modern	R_1	1	Modern
	Less Modern	--	0	Not Modern
Social Class	High (35-100% WC)	S_1	1	High Social Class
	Low (0-34% WC)	--	0	Not High Social Class
Metropolitanization	Central City	--	0	Not Ring
	Ring	M_1	1	Ring
	Non-Metropolitan	--	0	Not Ring
Metropolitanization	Central City	M_2	1	Central City
	Ring		0	Not Central City
	Non-Metropolitan		0	Not Central City
Interaction Effects:				
Region-Ring	$R_1=0,\ M_1=0$	--	0	
	$R_1=0,\ M_1=1$	R_1M_1	1	
	$R_1=1,\ M_1=1$	--	0	
	$R_1=1,\ M_1=0$	R_1M_1	1	
Region-Central City	$R_1=0,\ M_2=0$	--	0	
	$R_1=0,\ M_2=1$	R_1M_2	1	
	$R_1=1,\ M_2=1$	--	0	
	$R_1=1,\ M_2=0$	R_1M_2	1	

Table 10-4. Continued

Original Variable			Dummy Variable	
Variable	Category	Symbol	Value	Interpretation
Region-Social Class	$R_1=0,\ S_1=0$	--	0	
	$R_1=0,\ S_1=1$	R_1S_1	1	
	$R_1=1,\ S_1=1$	--	0	
	$R_1=1,\ S_1=0$	R_1S_1	1	
Ring-Social Class	$M_1=0,\ S_1=0$	--	0	
	$M_1=0,\ S_1=1$	M_1S_1	1	
	$M_1=1,\ S_1=1$	--	0	
	$M_1=1,\ S_1=0$	M_1S_1	1	
Central City-Social Class	$M_2=0,\ S_1=0$	--	0	
	$M_2=0,\ S_1=1$	M_2S_1	1	
	$M_2=1,\ S_1=1$	--	0	
	$M_2=1,\ S_1=0$	M_2S_1	1	

Unstandardized Regression Equation:

$$\hat{Y}_i = a + r_1R_1 + s_1S_1 + m_1M_1 + m_2M_2 + (r_1m_1)(R_1M_1) + (r_1m_2)(R_1M_2) + (r_1s_1)(R_1S_1) + (m_1s_1)(M_1S_1) + (m_2s_1)(M_2S_1) \ .$$

where:

$\hat{Y}_i$ = predicted mean on the dependent variable for the i th cell

a = predicted mean for the pivotal (least modern) cell

r_1, s_1, m_1, and m_2 = unstandardized regression coefficients for the main effects

(r_1m_1), (r_1m_2) . . . (m_2s_1) = unstandardized regression coefficients for the interaction terms.

three category metropolitanizational context variable, two codes were required. In the first instance, the ring is coded as "1" and the two other contexts as "0," while in the second instance the central city is coded as "1" and the other two contexts as "0." These two recoded variables are adequate to account for all the variance in the original three-category metropolitanization context variable.

The coding of the interactions is more complex, but conforms to standard practice for dummy independent variables.[2] As an example, consider the regional-social class interaction variable. If a school was in the high modern regional context and in the low modern social class context, it was coded "1." In addition, schools in the low modern regional context and the high modern social class context were also coded "1." Schools in the two other region-social class categories were coded "0." The procedure for developing each of the four additional relevant interaction terms was merely an extension of that carried out with respect to the region and the social context variables (see Table 10-4).

The dependent variable, organizational size, was retained in its original interval form. Thus, the unstandardized regression coefficients which result from our analysis can be interpreted as predicted deviations in organizational size from the least modern sociocultural context category: that which is of low social class in a non-metropolitan area of the less modern region. The results of such an analysis, presented in Table 10-5, clarify some of the relationships which were suggested in Tables 10-1, 10-2, and 10-3. Within each of the three types of schools, the joint association of the main effects and interaction terms with organizational size, as represented by the F-ratios, is significant.

However, to test the organizational size hypothesis, it is particularly important to examine within each type of school the independent effect of each of the social context categories. Within the senior high schools each of the main effects is significant in the anticipated direction with the metropolitanization context variable having a particularly noticeable effect upon organizational size. Within the elementary and junior high schools the social class context effect is not significant, but the effect of the other two context variables is. In general, the data regarding main effects presented in Table 10-5 support the expectation that the more modern the sociocultural context of American public schools, the more modern their organizational size.

However, there are two important interaction effects which should also be noted. Within all three types of schools, the region-central city interaction (R_1M_2) is statistically significant, suggesting that size differences between schools in different metropolitanizational areas of the more modern region are greater than those in the less modern region. The data presented earlier in Table 10-3 bear this out rather vividly. There it can be noted, for example, that in the more modern region the average central city high school of high social class contains

Table 10-5. Eighth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Organizational Size, by Type of Public School.

Sociocultural Context Variable[a]	Type of Public School Elementary (N=1724)	 Junior High (N=933)	 Senior High (N=1150)
Main Effects:			
More Modern Region (R_1)	1.6*	8.4*	13.9*
Metropolitan: Ring (M_1)	3.5*	9.4*	23.5*
Metropolitan: Central City (M_2)	7.3*	22.6*	41.8*
High Social Class (S_1)	-1.1	1.0	10.9*
Interaction Effects:			
R_1M_1	0.3	1.4	5.5*
R_1M_2	-1.5*	-4.3*	-4.8*
R_1S_1	0.3	-0.3	-1.2
M_1S_1	0.2	0.7	-0.4
M_2S_1	3.3*	7.3*	1.1
Predicted Mean for Least Modern Context	15.7	24.3	32.9
F-Ratio	27.3*	35.4*	47.5*
Multiple R	.35	.51	.52

* $p < .05$

[a] See Table 10-4 for operational definition of sociocultural context variables.

27.7 more teachers (105.1 - vs - 77.4) than the comparable school in the ring. However, in the less modern region, the comparable difference is only 5.4 (78.5 - vs - 73.1). Similar, but less dramatic interactions can be noted throughout Table 10-3.

Also significant at the elementary and junior high school levels is the central city-social class interaction (M_2S_1). A re-examination of Table 10-3 suggests that this interaction is attributable primarily to the fact that, contrary to the general trend noted earlier, in the central cities of both regions, elementary and junior high schools in low social class contexts tend to be larger than those in the high social class contexts. Both of these interactions have important implications for some of the current problems of the urban ghetto school and we shall consider them further in Chapter Fourteen.

Modernization Context and Organizational Specialization

As noted in Chapter Four the "enhancement of adaptive capacity" of the organization can be expected to result in organizational specialization, and such specialization, in turn, would be more likely to occur in the more modern social contexts. Some insight into the variety of organizational structures within American elementary and secondary education was provided in Chapter Nine. There it was noted that the modal grade structure within the 6,333 public schools of the SCS sample (what is often referred to as the 6-3-3 plan) accounts for less than 33 percent of all public schools in the sample. Clearly, there is considerable diversity in the organizational structure of public education in America (see Table 9-10). It is our contention that some of these structural arrangements reflect a greater degree of organizational specialization, and thus modernization, than do others. In particular, we would anticipate that the fewer the grade levels located under a single school administration, the more modern the school.[3] Such an expectation would be consistent with our working hypothesis stated in Chapter Eight.

For this purpose, a comparison of four types of public schools, each of which contains a twelfth grade but which vary in their degree of specialization was performed. The least specialized of such schools which occurs with any frequency in America (see Table 9-10) is the school containing grades one through twelve (1-12). Somewhat more specialized is the junior-senior high school, a school containing grades seven through twelve (7-12). Even more specialized is the four-year senior high school containing grades nine through twelve (9-12). Finally, the most specialized school containing a twelfth grade which occurs with noticeable frequency in American public education is the three-year senior high school containing grades ten through twelve (10-12).

Zero-order effects. Within the SCS sample, there are 2,148 public schools of these four types. Of that number, 16 percent contain grades 1-12, 14 percent grades 7-12, 37 percent grades 9-12, and 33 percent grades 10-12 (Table 10-6). However, the frequency with which such schools

Table 10-6. Cumulative Percentage Distributions across Four Degrees of Organizational Specialization, for each of Three Sociocultural Context Variables.

Sociocultural Context Variable	Degree of Organizational Specialization				Number of Schools
	Low (Grades 1-12)	(Grades 7-12)	(Grades 9-12)	High (Grades 10-12)	
All Contexts	15.8%	30.4%	67.0%	100.0%	2148
Region:					
Northeast	9.5	29.9	66.9	100.0	581
West	5.1	8.9	55.8	100.0	394
Great Lakes	12.3	20.9	54.1	100.0	244
Plains	19.9	36.5	71.9	100.0	587
Southeast	34.2	52.3	81.0	100.0	342
Metropolitanization:					
Central City	4.0	14.5	51.7	100.0	429
Ring	7.6	21.5	60.4	100.0	766
Non-Metropolitan	32.2	50.2	82.7	100.0	733
School-Community Social Class:					
High	3.6	13.5	50.6	100.0	393
Moderately High	7.7	21.6	59.5	100.0	481
Moderately Low	13.9	30.2	70.5	100.0	589
Low	40.0	58.5	85.3	100.0	477

exist varies rather consistently across each of the three modernization contexts. Table 10-6 presents a series of cumulative percentage distributions across the four degrees of organizational specialization for each of the three modernization context variables. There, it can be observed that no matter at what point along the degree of specialization continuum one distinguishes between the "less" specialized and the "more" specialized schools, the pattern is consistent with respect to both the metropolitanizational context variable and the school-community social class context variable; the less modern the context, the greater the frequency of unspecialized schools (Table 10-6). The pattern with respect to the regional context of these schools is less consistent, but is generally as predicted. The most modern region (the Northeast) clearly has a smaller percentage of 1-12 schools (9.5 percent) than does the least modern region (the Southeast) with 34.2 percent. However, there is a rather consistent reversal between the Northeast and the West. No matter how one might distinguish between the four types of schools in terms of less versus more organizational specialization, the Northeast (which we have defined as the most modern region) has fewer highly specialized schools than does the West. To understand this anomaly, it is helpful to consider the different historical periods in which public schools were originally organized in these two regions, as well as the fact that as the Northeast has been modernizing, it has been necessary to reform more traditional organizational patterns which have been in effect for over a century, while in the West, new organizational patterns could be established more rapidly without the necessity of having to abandon an established one.

Higher-order effects. In order to examine the independent effects of each sociocultural context variable, the association between context and degree of organizational specialization has been computed in the form of cumulative percentages within each of the twelve modernization context categories introduced in Chapter Nine. These results offer further support for our reasoning regarding organizational specialization (Table 10-7). For the purpose of interpreting Table 10-7, let us define low specialization to be 1-12 schools and 7-12 schools and high specialization to be 9-12 and 10-12 schools. Given this definition, it can be noted that when the social class and metropolitanizational contexts of the schools are held constant through cross tabulation,in five of the six possible comparisons between the two regional contexts, the more modern region has fewer schools of low specialization than does the less modern region. Similarly, when the regional and metropolitanizational contexts of the schools are held constant, in all six of the six possible comparisons between the two social class contexts, the high social class category contains fewer schools of low specialization than does the low social class category. The picture with respect to the metropolitanizational context is also fairly consistent. When the regional and social class contexts of the schools are held constant, in three of the four possible comparisons between the three metropolitanizational contexts, the central city contains fewer schools of low specialization than does the ring, than does the non-metropolitan areas (Table 10-7).

Table 10-7. Cumulative Percentage Distributions Across Four Degrees of Organizational Specialization, by Twelve Social Context Categories.

Sociocultural Context			Degree of Organizational Specialization				Number of Schools
Region	Metropolitanization	Social Class	1 (Grades 1-12)	2 (Grades 7-12)	3 (Grades 9-12)	4 (Grades 10-12)	
More Modern	Central City	High	1.6%	8.9%	53.7%	100.0%	123
		Low	1.7	9.5	50.9	100.0	116
	Ring	High	2.7	15.9	53.2	100.0	295
		Low	12.2	25.4	64.4	100.0	205
	Non-Metro.	High	8.2	27.0	55.3	100.0	85
		Low	31.4	51.1	80.3	100.0	137
Less Modern	Central City	High	7.9	19.0	39.7	100.0	63
		Low	10.2	32.7	59.2	100.0	49
	Ring	High	4.5	17.3	63.6	100.0	110
		Low	11.9	38.1	73.8	100.0	84
	Non-Metro.	High	15.3	23.5	66.3	100.0	98
		Low	44.0	63.3	94.0	100.0	368
	All Contexts		16.7%	30.7%	67.4%	100.0%	1733

In order to summarize more systematically the independent and joint effects of each of the three modernization context variables on the degree of organizational specialization, a least squares regression analysis similar to that done with respect to organizational size was performed. Again, dummy main and interaction effects pivoted on the least modern sociocultural context were used. In coding the degree of organizational specialization, the 1-12 schools were arbitrarily assigned a score of "1." Since the 7-12 schools contain only one-half the number of grades as do the 1-12 schools, they were considered to be twice as specialized and thus were assigned a score of "2." Similarly, the 9-12 schools were assigned a score of "3" and the 10-12 schools a score of "4." The unstandardized regression coefficients which result from such an analysis can be interpreted as predicted deviations in degree of specialization from the predicted specialization score of 1.99 for the least modern sociocultural context.

The results of the analysis are presented in Table 10-8 and serve to clarify the more informal presentations of Tables 10-6 and 10-7. Each of the main effects makes a significant independent contribution to the prediction of the degree of organizational specialization, with a particularly noticeable contribution from the metropolitanizational context variable. Clearly, these data support the prediction noted earlier that the more modern the sociocultural context of American public schools, the more modern their organizational structure.

However, it is also important to note the three significant interaction effects reported in Table 10-8, each one involving social class. The specific nature of these interactions is also apparent in Table 10-7. There, it can be noted that the difference between the percent of schools of low specialization in the two social class contexts consistently varies with the degree of modernization of both the regional and metropolitanizational contexts. Specifically, the more modern the region and the more modern the metropolitanization area, the less the effect of social class context on organizational specialization (Table 10-7). This finding will be considered further in Chapter Fourteen.

Summary

In this chapter we have tested two predictions derived from the working hypothesis that the more modern the sociocultural context of American public schools, the more modern their organizational structure. Both organizational size and specialization were found to vary with the regional, metropolitanizational, and social class contexts of schools. In general, although significant interaction effects were noted, each of the zero-order main effects persisted when the effects of the other context variables were removed. In Chapter Fourteen we shall return to consider some of the implications of these findings for the sociological study of schools as formal organizations as well as for the equalization of educational opportunity within contemporary America.

Table 10-8. Eighth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Degree of Organizational Specialization of Public Schools.[a]

Sociocultural Context Variable[b]	Coefficient (N=1733)
Main Effects:	
Modern Region (R_1)	.20*
Metropolitan: Ring (M_1)	.44*
Metropolitan: Central City (M_2)	.67*
High Social Class (S_1)	.25*
Interaction Effects:	
R_1M_1	.04
R_1M_2	.03
R_1S_1	.10*
M_1S_1	.24*
M_2S_1	.36*
Predicted Score for Least Modern Context	1.99
F-Ratio	59.4*
Multiple R	.49

* $p < .05$

[a] Degree of Organizational Specialization coded as follows: 1=(1-12 schools), 2=(7-12 schools), 3=(9-12 schools), 4=(10-12 schools)

[b] See Table 10-4 for operational definition of sociocultural context variables

Notes and References (10)

1. For a technical discussion of this procedure, see Daniel B. Suits, "Use of Dummy Variables in Regression Equations." *Journal of the American Statistical Association*, 52 (1957), pp. 548-551; M. Davies, "Multiple Linear Regression Analysis with Adjustment for Class Differences," *Journal of the American Statistical Association*, 56 (1961), pp. 729-735; Emanuel Melichar, "Least-Squares Analysis of Economic Survey Data," a paper presented at the 1965 Annual Meeting of the American Statistical Association; J. Johnston, *Econometric Methods* (New York: McGraw-Hill Book Company, 1963), pp. 221-230. For social science applications, see, for example, Guy H. Orcutt, *et al.*, *Microanalysis of Socioeconomic Systems* (New York: Harper Brothers, 1961), pp. 216-231; James N. Morgan, *et al.*, *Income and Welfare in the United States* (New York: McGraw-Hill Book Company, 1962), *ad passim*; or Alan B. Wilson, "Social Stratification and Academic Achievement" in *Education in Depressed Areas*, edited by A. Harry Passow (New York: Bureau of Publications, Teachers College, Columbia University, 1963), pp. 217-235.

2. See, for example, Orcutt, *et al.*, *op. cit.*

3. The grade levels under a single administration were coded from Question 1 of the *School Questionnaire*. For details, see Appendix B.

Chapter Eleven. Modernization Context and the Organizational Inputs of American Public Schools

In the previous chapter it was demonstrated that the structure of American public schools varies with the degree of modernization of their sociocultural context. In this chapter we consider further the impact of the sociocultural context of schools on their organizational structure and functioning by focusing on organizational inputs.

As noted in Chapter Four, the organizational inputs of schools consist primarily of the personnel, curriculum, and plant which are used by the organization to sustain and develop its position vis a vis its environment and which are applied by it to the production throughput (i.e., pupils) to produce outputs consistent with the requirements of the larger society. As with the structural characteristics considered in Chapter Ten, schools in the more modern context are expected to have more specialized input than schools in less modern contexts. We expect this for several reasons. First, more differentiated organizations would tend to have more specialized input requirements. Thus, more complex maintenance, adaptive, and production requirements in a more modern setting would lead to specialized personnel and equipment being brought into the organization. Secondly, more specialized inputs would increase the adaptive capacity of the school's response to institutional pressures. Since we noted that such adaptive pressures would be more frequent in modern contexts, we would expect such schools to emphasize specialized teaching qualifications, specialized teaching aids, etc. Thirdly, the reduced emphasis upon maintenance concerns in the school located in modern social settings would encourage innovative tendencies within the school supportive of specialized inputs. And finally, the sensitivity of the school to the more specialized needs of modern society would, in the more modern setting, tend to force it to respond to those needs through greater specialization in inputs.

In the sections which follow we again perform a secondary analysis of data collected in 1965 from public elementary, junior high, and senior high schools by the School Context Study (SCS). However, since the School Questionnaire of that study contained no questions which can be used as reasonable proxies for the degree of specialization of a school's curriculum, we must confine our analysis to measures of personnel and physical plant. If any one of the three modernization context variables bears a non-random independent association in the expected direction with any indicator of either of the two types of organizational inputs, we will claim support for the working hypothesis presented in Chapter Eight. However, because of the interaction effects noted in Chapter Ten, we will again be alert for relationships between the three modernization context variables and organizational input which are more complex than those predicted by our working hypothesis.[1]

It is widely understood that the organizational inputs of American public schools vary among the three types of schools which we are considering --for example, elementary schools have far less specialized curricular inputs than do junior or senior high schools. Therefore, to remove school level effects, it is again important that we consider separately the three types of schools, and this will be done. However, it is also important to note that we do not expect the modernization context to affect all types of schools uniformly. With respect to some indices of organizational inputs, some types of schools are expected to be so highly specialized that the sociocultural context can have little effect. Thus, for example, one would expect that since almost all senior high schools have a gymnasium, the existence of such can vary little by sociocultural context. On the other hand, far fewer elementary schools have a gymnasium and so we would expect that the sociocultural context would be an important variable in distinguishing between those schools which do and those which do not.

Before turning to our analysis of organizational inputs within the SCS data, it is also important to consider briefly the part the organizational size might play in determining such inputs. We noted in Chapter Ten that within all three types of schools (elementary, junior high, and senior high), organizational size was rather consistently related to all three modernization context variables. Therefore, one might conclude that any differences in organizational inputs which could be attributed to the sociocultural context are simply artifacts of the relationship between sociocultural context and organizational size. We would agree that differences in organizational structure can produce differences in organizational inputs, but we would not accept such a relationship as evidence that any effect of the degree of modernization of the sociocultural context on organizational inputs is spurious. The fact that certain types of inputs exist more in larger schools than in small ones does not invalidate our argument that the sociocultural context plays a part in the determination of organizational inputs. Rather, such an association suggests that certain structural variables (such as organizational size) intervene in a casual sequence between the sociocultural context of the school and its organizational inputs. In the analyses which follow, in addition to testing our working hypothesis, we will attempt to consider the intervening nature of organizational size. As in the previous chapter, we will present cell means (or rates) cross classified by the twelve sociocultural contexts introduced in Chapter Nine. However, our least squares regression analysis will be performed twice, first considering just the main and interaction effects of the contexts and then with the linear effects of organizational size removed by also entering this variable into the regression equation. The degree to which modernization context effects diminish after the effects of organizational size have been introduced will be interpreted as evidence of the degree of intervention of organizational size between the sociocultural context and organizational inputs.

Modernization Context and the Specialization of School Personnel

In this section the working hypothesis is tested using two indicators of the degree of specialization of a school's personnel--degree of professional training (percent with at least a master's degree), and sex distribution (percent male). Although each indicator at best taps specialization only indirectly, we feel that each is a reasonable proxy for the specialization variable and we will present documentation to this effect.

There is a general consensus that graduate education in the United States is more specialized than is either undergraduate or pre-collegiate education. Therefore, it seems reasonable to assume that teachers with a master's degree have undergone a more highly specialized form of training than have teachers with simply a bachelor's degree. Therefore, in recruiting teachers with higher degrees and rewarding them financially for this fact, schools are emphasizing as organizational inputs the specialized skills which such teachers possess. Our measure of the percent of teachers with at least a master's degree was obtained from the report of the principal of each school.[2]

Males in American society generally fill far more specialized roles than do females. In addition, male teachers generally are more linked to the world of work outside of the school than are female teachers, who represent more a relationship to the home. Therefore, we shall assume that the larger the percentage of male teachers in a school, the greater the organizational emphasis on personnel specialization. Our measure of the percent of the teachers in each school who are male was also obtained from the report of the school principal.[3]

Professional Training. Some indication of the validity of using the degree of formal professional training as indicative of the degree of organizational specialization with respect to the inputs of American public schools can be noted in Table 11-1. There it can be seen that, on the average, 16 percent of the teachers in the 1,699 elementary schools in the SCS sample possess at least a master's degree, while for junior and senior high schools, on the average, the corresponding percentages are 29 and 41, respectively. This relationship of greater professional training on the part of teachers in senior high schools than in junior high or elementary schools is not only true overall, but is true within each of the twelve sociocultural contexts defined by the simultaneous cross classification of the two regional, three metropolitanizational, and two social class context categories (Table 11-1). If, as we argued, secondary schools require a greater specialization in their organizational inputs than do elementary schools, then the percent of teachers with at least a master's degree does, in fact, reflect that specialization can serve as a reasonable proxy variable for it.

Above and beyond its association with the type of school, the percent of teachers who possess at least a master's degree bears a rather consistent relationship in the predicted direction with the degree of modernity of the sociocultural context in which the school is located. For 15 of 18 possible social class comparisons (those made within each of the three types of schools while holding constant both the regional and metropolitanizational contexts),

Table 11-1. Mean Per Cent of Teachers with at least a Master's Degree, by Type of Public School and Sociocultural Context.

Sociocultural Context			Type of Public School					
			Elementary		Junior High		Senior High	
Region	Metropolitanization	Social Class	Mean	N	Mean	N	Mean	N
More Modern	Central City	High	18.6	143	35.9	102	52.6	109
		Low	19.6	196	31.5	89	43.3	98
	Ring	High	19.4	287	31.8	201	47.9	233
		Low	12.5	201	26.3	96	38.1	142
	Non-Metro.	High	13.7	74	24.2	54	37.4	59
		Low	10.9	115	25.5	36	32.4	65
Less Modern	Central City	High	21.8	81	30.6	44	44.7	45
		Low	17.0	92	26.0	46	34.8	32
	Ring	High	16.8	106	24.1	69	40.9	89
		Low	11.0	89	24.8	43	33.6	50
	Non-Metro.	High	16.5	95	28.4	56	34.9	74
		Low	13.2	220	25.5	61	29.8	128
All Contexts			16.1	1699	29.0	897	40.6	1124

the average school in the high social class category has a greater percent of teachers with at least a master's degree than does the comparable school in the low social class category. Differences consistent with the working hypothesis also can be observed with respect to the regional and metropolitanizational context variables (Table 11-1).

The tendencies noted in Table 11-1 were summarized by means of a least squares regression analysis using dummy main and interaction effects.[4] These results provide rather comprehensive support for our expectations regarding organizational input. For each of the four context categories and within each of the three types of public schools, the differences between the more and the less modern sociocultural contexts are as predicted (Table 11-2). In addition, nine of the resulting 12 unstandardized regression coefficients for the main effects are statistically significant. Particularly noteworthy are the coefficients for the senior high schools. Each main effect is statistically significant as predicted and in no case is an interaction effect significant. Clearly the degree of modernization of the sociocultural context of senior high schools bears a rather consistent relationship with their organizational inputs as measured by the percent of teachers who possess at least a master's degree.

In order to examine the extent to which the relationships noted above can be attributed directly to the effects of context (as opposed to indirectly through the intervening effects of organizational size), the linear effects of size have been removed from the relationship between the modernization context of the schools and the percent of their teachers who hold at least a master's degree. These results, presented in Table 11-3, suggest that much of the effect of the metropolitanization context on this indicator of organizational input is indirectly through its effect on organizational size. However, the effects of the regional and social class contexts noted in Table 11-3 do persist after the effects of organizational size have been removed, suggesting that these contexts have a direct effect on organizational inputs above and beyond that which can be attributable to their indirect effects through the intervening variable of size.

Sex Distribution. As in the case of the percent of teachers who hold at least a master's degree, the percent of teachers who are male varies by type of school. The average of 1,739 elementary schools contains 11 percent male teachers, the average junior high school 49 percent, and the average senior high school 56 percent (Table 11-4). This relationship is true overall and also within each of the twelve sociocultural contexts. Therefore, if our earlier assumption that the degree of specialization of the inputs of American public schools varies with the type of school is true, the data presented in Table 11-4 provide empirical validation that the percent of teachers who are male is a reasonable indicator of the degree of that specialization.

In addition to these effects by type of school, there are several consistent relationships with the modernization context of the school. Particularly noteworthy is the fact that the percent of teachers who are male

Table 11-2. Eighth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Per Cent of Teachers with at least a Master's Degree, by Type of Public School.

Sociocultural Context Variable[a]	Type of Public School Elementary (N=1699)	Junior High (N=897)	Senior High (N=1124)
Main Effects:			
More Modern Region (R_1)	1.1	5.3*	7.0*
Metropolitan: Ring (M_1)	1.3	1.0	6.5*
Metropolitan: Central City (M_2)	5.7*	5.3*	10.3*
High Social Class (S_1)	4.0*	3.9*	9.1*
Interaction Effects:			
R_1M_1	-2.5*	-3.8*	-1.6
R_1M_2	-1.3	-3.9*	-2.7
R_1S_1	0.8	-0.7	-0.4
M_1S_1	-2.0	-1.1	-1.8
M_2S_1	0.8	-1.5	-2.0
Predicted Mean for Least Modern Context	3.1	26.6	29.9
F-Ratio	7.9*	4.1*	14.8*
Multiple R	.20	.20	.33

* $p < .05$

[a] See Table 10-4 for operational definition of sociocultural context variables.

Table 11-3. Ninth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Per Cent of Teachers with at least a Master's Degree (with the Linear Effects of Organizational Size also Removed), by Type of Public School.

Sociocultural Context Variable	Type of Public School Elementary (N=1674)	 Junior High (N=882)	 Senior High (N=1094)
Main Effects:			
More Modern Region (R_1)	0.8	4.1*	4.8*
Metropolitan: Ring (M_1)	1.0	-0.3	1.6
Metropolitan: Central City (M_2)	5.1*	2.6	1.2
High Social Class (S_1)	4.3*	3.8*	6.3*
Interaction Effects:			
R_1M_1	-2.5*	-4.0*	-3.0*
R_1M_2	-1.2	-3.4	-2.3
R_1S_1	0.9	-1.1	0.2
M_1S_1	-2.1	-1.4	-1.2
M_2S_1	0.5	-2.3	-1.6
Predicted Mean for Least Modern Context	11.5	23.7	23.0

*$p < .05$

Table 11-4. Mean Per Cent of Teachers who are Male, by Type of Public School and Sociocultural Context.

Sociocultural Context			Type of Public School					
			Elementary		Junior High		Senior High	
Region	Metropolitanization	Social Class	Mean	N	Mean	N	Mean	N
More Modern	Central City	High	9.6	147	48.3	106	57.3	111
		Low	12.7	203	53.5	96	55.7	101
	Ring	High	12.8	295	52.7	210	60.9	244
		Low	12.1	206	55.8	101	61.2	150
	Non-Metro.	High	12.7	76	53.1	57	59.7	62
		Low	15.8	116	52.4	38	63.0	66
Less Modern	Central City	High	6.3	84	35.4	47	42.6	48
		Low	8.5	92	39.7	48	46.8	33
	Ring	High	7.8	110	42.9	72	49.3	91
		Low	10.3	92	42.0	48	52.7	52
	Non-Metro.	High	7.8	95	43.3	58	50.1	74
		Low	8.5	223	44.5	62	51.6	135
All Contexts			10.8	1739	48.7	943	56.0	1167

bears a rather striking relationship in the predicted direction with the degree of modernity of the region in which the school is located. For all 18 possible regional comparisons (those made within each of the three types of schools while holding constant both the metropolitanizational and social class contexts), the average school in the more modern region has a greater percent of male teachers than does the comparable school in the less modern region (Table 11-4).

However, the differences by the metropolitanizational and social class contexts of these schools do not appear to be as expected. Within 14 of 18 possible comparisons between the two social class contexts, the average school in the low social class context has a greater percent of male teachers than does the comparable school in the high social class context (Table 11-4). In general, the pattern with respect to the metropolitanizational context of the schools is rather inconsistent with a tendency for the average school in the central cities to have a smaller percentage of male teachers than comparable schools in the ring or non-metropolitan areas (Table 11-4).

In order to summarize the tendencies noted in Table 11-4 a least squares regression analysis was again performed using dummy main and interaction effects. The results of this analysis confirm what was suggested above--that the importance of the modernization context in determining the percent of teachers who are male is not always in the manner expected. However, for all three types of schools (elementary, junior high, and senior high) the differences between the more and less modern regions is as predicted and is statistically significant--the more modern the region, the greater the percent of male teachers (Table 11-5). Significant relationships, but not in the expected direction, were generally found with respect to the differences between the high and low social class contexts and between the central city and non-metropolitan areas (Table 11-5). On the basis of these results, we can claim support for the working hypothesis with respect to the regional context, but not with respect to either the metropolitanizational or social class contexts. When the linear effects of organizational size are removed statistically from the relationship between the modernization context of schools and the percent of their teachers who are male, all of these generalizations still hold (Table 11-6). Evidently organizational size has little effect on the relationship between the sociocultural context of schools and the percent of their teachers who are male.

Modernization Context and the Specialization of School Plant

In order to make a further test of the organizational input hypothesis three indicators of the degree of specialization of school plant have been identified within the SCS data. These are the degree to which special areas within the plant are devoted to training in library, clerical, and mechanical skills. A highly modern society requires persons competent in

Table 11-5. Eighth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Per Cent of Teachers who are Male, by Type of Public School.

Sociocultural Context Variable	Type of Public School		
	Elementary (N=1739)	Junior High (N=943)	Senior High (N=1167)
Main Effects:			
More Modern Region (R_1)	3.7*	12.4*	11.1*
Metropolitan: Ring (M_1)	-0.5	-0.1	0.0
Metropolitan: Central City (M_2)	-1.9*	-4.2*	-5.5*
High Social Class (S_1)	-1.6*	-3.1*	-1.0
Interaction Effects:			
R_1M_1	1.5*	-1.2	0.3
R_1M_2	1.3*	-2.2*	-0.6
R_1S_1	-0.1	0.7	-1.1
M_1S_1	-0.7	0.6	-0.2
M_2S_1	0.6	2.1*	-0.8
Predicted Mean for Least Modern Context	8.7	43.9	52.1
F-Ratio	14.0*	22.4*	25.2*
Multiple R	.26	.42	.41

* $p < .05$

Table 11-6. Ninth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Per Cent of Teachers who are Male (with the Linear Effects of Organizational Size also Removed), by Type of Public School.

Sociocultural Context Variable	Type of Public School Elementary (N=1717)	 Junior High (N=930)	 Senior High (N=1146)
Main Effects:			
More Modern Region (R_1)	3.6*	12.9*	11.1*
Metropolitan: Ring (M_1)	-0.5	0.5	0.2
Metropolitan: Central City (M_2)	-2.3*	-2.8*	-4.9*
High Social Class (S_1)	-1.8*	-3.2*	-0.6
Interaction Effects:			
R_1M_1	1.4*	-1.3	0.5
R_1M_2	1.4*	-2.7*	-0.5
R_1S_1	-0.1	0.7	-1.0
M_1S_1	-0.7	1.0	-0.4
M_2S_1	0.7	2.8*	-0.9
Predicted Mean for Least Modern Context	8.3	45.0	52.5

* $p < .05$

all three skills and the degree to which schools assign portions of their physical plant solely to such purposes is indicative of the degree to which the organization is specialized in terms of its organizational inputs.

From one perspective, these variables could be considered as structural in nature, i.e., organizational attributes associated with specialization. However, they are also indicative of the specialized inputs into the school. Thus, a library requires various facilities, equipment and knowledge unique to itself; clerical courses require special curriculum, technical equipment, etc.; while a shop requires the input of specialized tools, materials, etc.

Our measure of the degree to which the school's plant is specialized in terms of library skills was taken from the principal's report regarding the existence of a centralized library in the school.[5] However, since we observed in our data an overwhelming number of junior and senior high schools with centralized libraries (97 and 99 percent, respectively) it seemed appropriate to make a test of the working hypothesis only with respect to the elementary schools. There only 73 percent of the schools in the SCS sample have centralized libraries and thus modernization context factors could be affecting decisions with respect to plant specialization.

To measure the degree to which the school's plant emphasizes the teaching of clerical skills, we constructed a score based upon the principal's answer to a question regarding the provision for typing instruction in the school.[6] A school which offered no typing received a score of "0." If the school offered typing, but had no room especially for that purpose, the school received a score of "1." Finally, a school which both offered typing and had at least one room especially for that purpose received a score of "2." However, since within our data senior high schools overwhelmingly have at least one room allocated to typing instruction, and elementary schools generally offer no typing instruction, we have confined our test of the organizational input hypothesis to just the junior high schools.

Our third indicator of organizational input with respect to school plant taps the organization's emphasis on the teaching of mechanical skills, as reflected by the existence within the plant of a shop with power tools.[7] Because 97 percent of the senior high schools have such a facility and 98 percent of the elementary schools do not, we will again confine our analysis of the effects of the sociocultural context on this aspect of organizational input to the junior high schools, where, on the average, 93 percent of the schools have a shop with power tools.

Centralized Library. The percent of elementary schools containing a centralized library varies greatly among the sociocultural contexts (Table 11-7). As expected, the most modern of the twelve contexts contains a far greater percentage of such schools (87.0 percent) than does the least modern context (60.4 percent). The difference in the proportion of schools with

Table 13-7. Per Cent of Elementary Schools Having a Centralized Library, by Sociocultural Context.

Sociocultural Context			Per Cent	Number of Schools
Region	Metropolitanization	Social Class		
More Modern	Central City	High	87.0	146
		Low	73.5	204
	Ring	High	76.4	296
		Low	66.2	204
	Non-Metro.	High	72.0	75
		Low	59.1	115
Less Modern	Central City	High	83.3	84
		Low	83.9	93
	Ring	High	80.4	112
		Low	75.8	91
	Non-Metro.	High	67.4	95
		Low	60.4	225
All Contexts			72.8	1740

②

a centralized library varies consistently as expected by metropolitanizational context. Holding constant the regional and social class contexts by cross classification, the central city has the greatest percentage of elementary schools having a library, followed by the ring, and then the non-metropolitan areas. Social class context also varies as expected with a higher percentage of schools in the high social class context with centralized libraries than in the low social class context. This is true within five of the six comparisons formed by simultaneously holding constant the regional and metropolitanizational contexts. However, the picture with respect to regional differences appears somewhat ambiguous, with four comparisons favoring the less modern region and only two the more modern region.

To summarize the data presented in Table 11-7 even further, a least squares regression analysis was performed with the schools coded as "1" if they had a centralized library and "0" if they did not. These results, presented in Table 11-8, offer further support for our expectations regarding the organizational input. Although the regional context is significant in a direction opposite from that predicted by the hypothesis, both the metropolitanizational and social class context variables provide results consistent with the working hypothesis. None of the interaction effects is statistically significant.

When the effects of organizational size on the existence of a centralized library are removed statistically, the original relationships noted above persist (Table 11-9). What is particularly interesting is the fact that although the effects of the metropolitanizational context are somewhat reduced when the effects of size are taken into account, the effect of the social class context is increased. Evidently, some of the effects of the metropolitanizational context on the existence of a centalized library is due to the fact that schools in the more metropolitan areas are larger. On the other hand, the social class context becomes more important as a determinant of the existence of a centralized library after controlling for organizational size.

Emphasis on Typing. The typing score varies with the sociocultural context of the junior high school. Greater plant emphasis on typing can be observed consistently in the more modern region than in the less modern region (Table 11-10). In addition, the average school in the central city of both regions and both social class contexts can be seen to have a plant which emphasizes typing more than the comparable school in either the ring or non-metropolitan areas. Social class differences as expected also appear in five of six possible comparisons holding constant both regional and metropolitanizational contexts.

The least squares regression summary of the effects of the modernization context on the typing emphasis score reveals that the independent effects of both region and the central city component of metropolitanization are rather dramatic and statistically significant (Table 11-11). However,

Table 11-8. Eighth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Existance of a Centralized Library in Elementary Schools.

Sociocultural Context Variable	Coefficients (N=1740)
Main Effects:	
More Modern Region (R_1)	-5.3*
Metropolitan: Ring (M_1)	10.0*
Metropolitan: Central City (M_2)	17.2*
High Social Class (S_1)	7.1*
Interaction Effects:	
R_1M_1	4.5
R_1M_2	2.8
R_1S_1	-4.2
M_1S_1	1.7
M_2S_1	1.4
Predicted Mean for Least Modern Context	60.7
F-Ratio	7.4*
Multiple R	.19

*p < .05

Table 11-9. Ninth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Existance of a Centralized Library in Elementary Schools (with the Linear Effects of Organizational Size Removed).

Sociocultural Context Variable	Coefficients (N=1718)
Main Effects:	
More Modern Region (R_1)	-6.7*
Metropolitan: Ring (M_1)	7.1*
Metropolitan: Central City (M_2)	10.9*
High Social Class (S_1)	8.4*
Interaction Effects:	
R_1M_1	3.9
R_1M_2	3.8
R_1S_1	-4.3
M_1S_1	1.3
M_2S_1	-1.3
Predicted Mean for Least Modern Context	47.2

*$p < .05$

Table 11-10. Mean Typing Emphasis Score for Junior High Schools, by Sociocultural Context.

Sociocultural Context			Mean	Number of Schools
Region	Metropolitanization	Social Class		
More Modern	Central City	High	1.40	104
		Low	1.50	96
	Ring	High	1.02	213
		Low	0.86	101
	Non-Metro.	High	1.02	57
		Low	0.79	38
Less Modern	Central City	High	1.15	47
		Low	1.04	47
	Ring	High	0.73	74
		Low	0.63	48
	Non-Metro.	High	0.83	58
		Low	0.63	63
	All Contexts		1.01	948

Table 11-11. Eighth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Typing Emphasis in Junior High Schools.

Sociocultural Context Variable	Coefficient (N=948)
Main Effects:	
More Modern Region (R_1)	.31*
Metropolitan: Ring (M_1)	-.01
Metropolitan: Central City (M_2)	.45*
High Social Class (S_1)	.06
Interaction Effects:	
R_1M_1	-.05
R_1M_2	-.08
R_1S_1	.02
M_1S_1	.03
M_2S_1	.12
Predicted Mean for Least Modern Context	0.62
F-Ratio	10.1*
Multiple R	.30

*$p < .05$

the ring appears to be no different from the non-metropolitan areas, and the social class effect (although in the predicted direction) is not statistically significant. Thus, full support for our expectations regarding organizational input is observed with respect to region, and partial support with respect to the metropolitanizational context. Further, when the linear effects of organizational size are removed, the effects of region and central city, although reduced somewhat, still persist (Table 11-12).

Shop with Power Tools. Although 93 percent of the junior high schools in the SCS sample contain a shop which is equipped with power tools, this percentage varies greatly with the sociocultural context of the school. In the most modern of the twelve sociocultural contexts, over 99 percent of the schools have such a facility within their plant while in the least modern of the twelve contexts, only 64 percent do (Table 11-13).

In particular, consistent differences can be noted in this relationship according to the region in which the schools are located. When the metropolitanizational and social class contexts are held constant by cross tabulation, for all six possible regional comparisons the more modern region has a greater percentage of its schools with a shop equipped with power tools than does the less modern region. Rather consistent differences also seem apparent with respect to the social class and metropolitanizational context variables.

A least squares regression summary of these tendencies offers consistent support for our expectations regarding organizational input. Each of the three modernization context variables is significantly related in the expected manner to the proportion of schools having a shop with power tools (Table 11-14). However, important interaction effects are also significant, particularly those involving combinations of social class with either region, the central city, or the ring. A comparison of the predicted percentages presented in Table 11-14 with the actual percentages in Table 11-13 suggests that the difference between the two social class contexts is accentuated in the ring and non-metropolitan areas of the less modern region and in the non-metropolitan areas of the more modern region. Thus, for example, whereas in the central city of the less modern region the difference between the percent of schools in the high and low social class contexts having a shop with power tools is 3.2 (99.1 versus 96.9), for the ring and non-metropolitan areas of this same region the differences are 22.4 and 33.0 percent, respectively (Table 11-13). Clearly, social class context affects the existence of a shop with power tools differently in different metropolitanizational contexts.

As was noted in the case of the other two indicators of physical plant organizational input, the relationship between the degree of modernization of the sociocultural context of American public junior high schools and the existence of a shop with power tools is also relatively independent of the relationship between context and organizational size (Table 11-15).

Table 11-12. Ninth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Typing Emphasis in Junior High Schools (with the Linear Effects of Organizational Size Removed).

Sociocultural Context Variable	Coefficient (N=932)
Main Effects:	
More Modern Region (R_1)	0.23*
Metropolitan: Ring (M_1)	-0.12
Metropolitan: Central City (M_2)	0.21*
High Social Class (S_1)	0.02
Interaction Effects:	
R_1M_1	-0.07
R_1M_2	-0.06
R_1S_1	0.03
M_1S_1	0.04
M_2S_1	0.12*
Predicted Mean for Least Modern Context	1.49

*$p < .05$

Table 11-13. Per Cent of Junior High Schools Having a Shop with Power Tools, by Sociocultural Context.

Sociocultural Context			Per Cent	Number of Schools
Region	Metropolitanization	Social Class		
More Modern	Central City	High	99.1	105
		Low	96.9	96
	Ring	High	98.6	211
		Low	99.0	101
	Non-Metro.	High	93.0	57
		Low	86.8	38
Less Modern	Central City	High	97.8	46
		Low	91.7	48
	Ring	High	90.5	74
		Low	68.1	47
	Non-Metro.	High	96.5	57
		Low	63.5	63
	All Contexts		92.7	943

Table 11-14. Eighth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Existance of a Shop with Power Tools in Junior High Schools.

Sociocultural Context Variable	Coefficient (N=943)
Main Effects:	
More Modern Region (R_1)	11.0*
Metropolitan: Ring (M_1)	4.5*
Metropolitan: Central City (M_2)	11.8*
High Social Class (S_1)	8.3*
Interaction Effects:	
R_1M_1	-4.7*
R_1M_2	3.1
R_1S_1	8.9*
M_1S_1	5.1*
M_2S_1	6.8*
Predicted Mean for Least Modern Context	65.4
F-Ratio	18.9*
Multiple R	.39

*$p < .05$

Table 11-15. Ninth-order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Existance of a Shop with Power Tools in Junior High Schools (with the Linear Effects of Organizational Size Removed).

Sociocultural Context Variable	Coefficient (N=928)
Main Effects:	
More Modern Region (R_1)	9.8*
Metropolitan: Ring (M_1)	2.7
Metropolitan: Central City (M_2)	7.1*
High Social Class (S_1)	11.9*
Interaction Effects:	
R_1M_1	-4.8*
R_1M_2	4.5
R_1S_1	9.6*
M_1S_1	0.3
M_2S_1	3.6*
Predicted Mean for Least Modern Context	61.5

*$p < .05$

Summary

In this chapter the association of the degree of modernization of the sociocultural context of schools with five indicators of their organizational inputs has been examined. Two of these indicators (level of professional training and sex distribution) tapped inputs associated with the school's personnel, and three (centralized library, emphasis on typing, and shop with power tools) tapped inputs associated with the school's physical plant. In the case of all indicators, some aspect of the sociocultural context was associated with organizational input as expected. In the case of the percent of senior high school teachers with at least a master's degree and the percent of junior high schools having a shop equipped with power tools, each of the three context variables was consistently associated with organizational input as expected. Further, these context effects were found to exist after any effects of organizational size on organizational inputs had been removed statistically. After turning to examine the effects of the degree of modernization of the sociocultural context on production throughput and output, we will return in Chapter Fourteen to consider the above findings further.

Notes and References (11)

1. A one-tailed test of statistical significance will be used in the case of those main effects which are in the predicted direction. Any main effects which are not in the predicted direction, along with all interaction effects, will be considered using a two-tailed test.

2. See Appendix B, School Questionnaire, Item 4e.

3. See Appendix B, School Questionnaire, Item 4a.

4. See Chapter Ten (especially Table 10-4) for a presentation of some of the details of this statistical technique.

5. See Appendix B, School Questionnaire, Item 13a.

6. See Appendix B, School Questionnaire, Item 15.

7. See Appendix B, School Questionnaire, Item 14.

Chapter Twelve. Modernization Context and the Production Throughput and Output of American Public Schools

Chapter Four considered at length a conceptualization of the school as an open social system. In Chapter Eight we made explicit a working hypothesis that the more modern the sociocultural context of American public schools, the more modern their organizational structure and functioning. In the present chapter we focus on an analysis of the influence of the three sociocultural contexts previously identified upon the school's production throughput and output. Again, we anticipate that, consistent with the working hypothesis, the schools in the more modern sociocultural contexts will exhibit more effective production throughput and output than will schools in the less modern sociocultural contexts.

In accordance with the reasoning introduced in Chapter Two and summarized in Chapter Eight, we view as "effective" those production throughputs and outputs which are consistent with the requirements of the larger American society. These requirements were identified as the need for personnel with both technical knowledge and skill and with an instrumental orientation to social relationships essential to the application of that knowledge and skill in a complex industrial (i.e., modern) society. Our distinction between production throughputs and outputs will be consistent with that made in Chapter Four and will be reviewed briefly at appropriate points in the present chapter.

It will be remembered that in Chapter Eleven, in addition to testing the working hypothesis which has been guiding the empirical portion of this inquiry, we also explored the degree to which organizational size (as one indicator of organizational structure) might intervene between the effects of the sociocultural context of the school on its organizational inputs. In this chapter we will perform a similar elaboration of our analysis. However, in addition to removing the effects of organizational size from the context-throughput and context-output relationships, we will also remove some of the effects of organizational inputs--those which are represented by the percent of teachers who hold at least a master's degree. Although this is obviously only a small portion of what we have conceptualized in Chapter Four as organizational input, it is the indicator of this input which in Chapter Eleven we found to have the most pervasive association with the sociocultural context. Thus, by removing some organizational input effects, as well as those of organizational size, we can begin to consider the direct effects of context on throughput and output from those which are through the intervening mechanisms of organizational structure and inputs.

Modernization Context and Production Throughput

As noted in Chapter Four, from an open-systems perspective, "organizational throughput" refers to the condition of the "raw materials" which are being transformed by the organization in meeting its extrinsic functional requirements. For the American public school these "raw materials," we have argued in Chapter Four, are the pupils at the time of their initial assignment to the school and the extrinsic functional requirements are the technical knowledge, skills, and instrumental orientation required by the larger society.

In this section we consider production throughput, using an indicator of each of these components of the organization's extrinsic functional requirements: knowledge, skill, and orientation. As an indirect indicator of the effectiveness of the organization in transmitting technical knowledge, we have chosen from the School Context Study (SCS) data the principal's report of the percent of students who are one year or more behind grade level in reading--in contemporary American society, students who do not know how to read well in English cannot easily proceed on to achieve high-level technical knowledge.[1] As an indirect indicator of the effectiveness of the organization in transmitting technical skill we have chosen the average IQ score of the school as reported by the principal, for such a score represents the competence of the student body in handling the types of complex intellectual tasks required by the larger society.[2] As an indirect indicator of the effectiveness of the organization in developing an instrumental orientation we have chosen the proportion of an age cohort which has been set back (again as reported by the principal).[3] Although such a measure obviously has a component tapping the acquisition of technical knowledge and skill, it should be noted that students in public schools are frequently set back because of their "immature" social performance as well as their inadequate intellectual performance.

As in the case of Chapters Ten and Eleven, production throughput will be examined using the data described in Chapter Nine. Consistent with our working hypothesis, we would expect schools in the more modern sociocultural contexts (in contrast to those in the less modern contexts) to be more effective in transmitting these particular attributes to their pupils. However, we shall again restrict ourselves to only that portion of the sample which involves public elementary, junior high, and senior high schools as defined in Table 9-10.

If within any of the three subsamples (elementary, junior high, and senior high schools) any one of the three modernization context variables bears a nonrandom independent association in the predicted direction with any of our measures of production throughput, we will claim support for our working hypothesis. However, as in the previous two chapters, we will again be alert for relationships more complex than those which we have anticipated, and thus will examine all first-order interactions among the three context variables.[4]

Technical Knowledge. The effectiveness of the school in transmitting technical knowledge, as measured by school rates of reading retardation, varies greatly with the sociocultural contexts in which the school is located. Particularly noticeable are social class effects. In all three types of public schools, when the effects of the regional and metropolitanizational contexts are held constant through cross-tabulation, the average school in the high social class context has a smaller percentage of students who are one or more years behind grade level in reading than does the comparable school in the low social class context (Table 12-1).

A regional context effect is also apparent, but not nearly as pronounced as that attributable to the social class context. For senior high schools, holding constant metropolitanizational and social class context, in all six observable instances the average school in the more modern region has a smaller percentage of students retarded in reading than does the comparable school in the less modern region. For junior high and elementary schools the comparable proportions are five out of six, and three out of six, respectively (Table 12-1).

The expected metropolitanizational context effect does not appear to exist with respect to production throughput. According to our expectation, the least retardation should occur in the central city, followed by the ring, and the most in the non-metropolitan areas. However, in the low social class contexts of both regions just the opposite seems to obtain, while in the high social class contexts reading retardation is least in the ring, second least in the central city, and (as expected) highest in the non-metropolitan areas (Table 12-1).

In order to summarize the independent effects of each of the twelve modernization context categories on reading retardation (as well as to explore the interaction effects apparent in Table 12-1) a least squares regression analysis using dummy independent variables was performed.[5] From the results of this analysis it is apparent that the negative effects (as expected) of high social class and the positive effects (not as expected) of the central city are statistically significant within all three types of schools (Table 12-2). Furthermore, the more modern region is significantly different from the less modern one within both elementary and senior high schools. However, the ring is not significantly different from the non-metropolitan areas in any of the three types of schools. What is particularly noticeable within all three types of schools considered in Table 12-2 is a significant M_2S_1 interaction. It is apparent from Table 12-1 that social class context differences in reading retardation are clearly greater in the central city than in the two other metropolitanizational areas. In that table it can be noted, for example, that the average junior high school in the low social class context of the central city of the more modern region has 26.0 percent greater retardation than the comparable school of high social class (44.0 - vs - 18.0). In the ring

Table 12-1. Mean Per Cent of Pupils at Least One Year Behind Grade Level in Reading, by Type of Public School and Sociocultural Context.

Sociocultural Context			Type of Public School					
			Elementary		Junior High		Senior High	
Region	Metropolitanization	Social Class	Mean	N	Mean	N	Mean	N
More Modern	Central City	High	12.5	146	18.0	102	19.1	110
		Low	33.8	197	44.0	95	32.5	100
	Ring	High	11.2	286	15.3	209	14.8	236
		Low	19.4	202	25.2	99	22.4	151
	Non-Metro.	High	13.4	72	18.9	53	16.9	61
		Low	19.3	113	23.3	37	18.3	66
Less Modern	Central City	High	16.3	84	18.8	46	19.4	46
		Low	33.2	89	41.7	48	38.7	29
	Ring	High	11.7	105	16.5	73	16.9	87
		Low	23.6	90	26.1	46	24.4	52
	Non-Metro.	High	14.1	93	16.9	56	19.9	72
		Low	21.6	219	22.4	60	27.4	131
	All Contexts		19.1	1696	22.9	924	21.2	1141

and non-metropolitan area the comparable differences are 9.9 percent (25.2 - vs - 15.3) and 4.4 percent (23.3 - vs - 18.9), respectively. Similar, but less dramatic interactions can be noted throughout Table 12-1.

On the basis of the results reported in Table 12-2 we claim support for our expectations regarding production throughput with respect to the social class and regional contexts, but not with respect to the metropolitanizational context. Production throughput varies as anticipated with the degree of modernization of the sociocultural context of the school with respect to region and social class, but not with respect to metropolitanization. Since this unexpected pattern of results with respect to the metropolitanizational context will occur throughout this chapter, we shall postpone until Chapter Fourteen a discussion of its implications for our theoretical formulation.

In order to examine the extent to which the relationship noted above can be attributed directly to the effects of context (as opposed to indirectly through the intervening effects or organizational structure and inputs) the linear effects of organizational size and degree of professional training have been removed from the relationship between the sociocultural context of the schools and the percent of the pupils who are at least one year behind their grade level in reading. The results of such an analysis suggest that very little of the variation in reading skill attributable in Table 12-2 to the sociocultural context is due to either the size or the degree of professional training present within the school as a social organization (Table 12-3). Each of the coefficients which was significant before these additional variables were introduced retains its significance. Particularly noteworthy is the case of the elementary and junior high schools where the statistical control for size and degree of professional training accentuates, rather than diminishes, the apparent effect of the sociocultural context of schools on their throughput as measured by the percent of pupils who are at least one year behind grade level in reading (Table 12-3).

Technical Skill. The effectiveness of the school in transmitting technical skill, as measured by the average IQ score of the students, also varies greatly with the degree of modernization of the sociocultural contexts in which the school is located. By and large this variation is similar to that just observed with respect to reading retardation. The actual context means which are presented in Table 12-4 have again been summarized through a least squares regression analysis and are presented in Table 12-5. There it can be noted that for all three types of schools the social class effects are significant in the manner expected, but (as in Table 12-2) the central city effects are significant in the opposite direction. Although the region effects are all in the predicted direction, only in the case of the elementary schools is the difference between the mean school IQ for the average school in the more modern region significantly greater than that for the comparable school in the less modern region (Table 12-4). Similarly, although for each type of school the effect of the ring is as predicted, only in the case of the junior high schools is it statistically significant.

Table 12-2. Eighth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Pupils at Least One Year Behind Grade Level in Reading, by Type of Public School.

Sociocultural Context Variable[a]	Type of Public School Elementary (N=1696)	 Junior High (N=924)	 Senior High (N=1141)
Main Effects:			
More Modern Region (R_1)	-1.8*	-0.1	-2.7*
Metropolitan: Ring (M_1)	-0.7	0.3	-0.9
Metropolitan: Central City (M_2)	6.9*	10.2*	6.6*
High Social Class (S_1)	-14.6*	-17.2*	-12.1*
Interaction Effects:			
R_1M_1	0.3	1.3	-1.9
R_1M_2	-0.1	0.4	-1.6
R_1S_1	-0.3	0.4	-1.7
M_1S_1	1.3	2.3	1.8
M_2S_1	6.6*	9.9*	5.5*
Predicted Mean for Least Modern Context	21.5	21.9	27.0
F-Ratio	48.0*	41.7*	18.8*
Multiple R	.45	.54	.36

* $p < .05$

[a] See Table 10-4 for operational definition of sociocultural context variables.

Table 12-3. Tenth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Pupils at Least One Year Behind Grade Level in Reading (With the Linear Effects of Organizational Size and Input Specialization also Removed), by Type of Public School.

Sociocultural Context Variable	Type of Public School Elementary (N=1633)	 Junior High (N=867)	 Senior High (N=1075)
Main Effects:			
More Modern Region (R_1)	-2.2*	-1.4	-2.4*
Metropolitan: Ring (M_1)	-2.1*	-0.5	-0.7
Metropolitan: Central City (M_2)	4.7*	8.4*	7.0*
High Social Class (S_1)	-14.2*	-17.8*	-12.3*
Interaction Effects:			
R_1M_1	0.9	1.0	-2.4
R_1M_2	0.2	0.8	-1.7
R_1S_1	-0.3	-0.1	-2.0
M_1S_1	0.9	2.7*	1.9
M_2S_1	5.7*	9.9*	5.7
Predicted Mean for Least Modern Context	16.6	19.1	27.8

* $p < .05$

Table 12-4. Mean School IQ Score, by Type of Public School and Sociocultural Context.

Sociocultural Context			Type of Public School					
			Elementary		Junior High		Senior High	
Region	Metropolitanization	Social Class	Mean	N	Mean	N	Mean	N
More Modern	Central City	High	106.3	135	105.3	96	103.2	103
		Low	95.7	182	93.9	77	97.3	93
	Ring	High	108.8	273	109.1	197	106.7	226
		Low	101.6	190	102.0	96	101.1	145
	Non-Metro.	High	105.0	66	105.1	53	105.3	57
		Low	102.7	102	101.2	35	101.7	65
Less Modern	Central City	High	104.3	78	105.9	45	103.4	44
		Low	93.1	82	94.9	45	94.3	27
	Ring	High	107.2	101	107.2	70	103.7	85
		Low	96.5	75	100.1	46	102.2	47
	Non-Metro.	High	105.9	86	106.1	49	103.7	70
		Low	99.9	199	99.3	55	99.9	122
	All Contexts		102.6	1569	103.6	864	102.6	1084

Table 12-5. Eighth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and School IQ Score, by Type of Public School.

Sociocultural Context Variable	Type of Public School Elementary (N=1569)	 Junior High (N=864)	 Senior High (N=1084)
Main Effects:			
More Modern Region (R_1)	2.8*	0.6	1.2
Metropolitan: Ring (M_1)	0.2	1.8*	0.7
Metropolitan: Central City (M_2)	-3.5*	-2.8*	-2.9*
High Social Class (S_1)	10.0*	9.3*	5.4*
Interaction Effects:			
R_1M_1	-1.1	-0.8	0.2
R_1M_2	-0.5	0.6	0.4
R_1S_1	1.3*	0.3	-0.5
M_1S_1	-2.3*	-0.9	-0.2
M_2S_1	-3.5*	-3.0*	-1.3
Predicted Mean for Least Modern Context	100.0	99.8	100.0
F-Ratio	48.4*	32.9	10.8*
Multiple R	.47	.51	.29

* $p < .05$

On the basis of these results we again conclude that there is support for our expectations regarding production throughput with respect to the sociocultural contexts of social class and region, but since the central city is significant in the opposite direction we cannot claim support with respect to the metropolitanizational context. In addition, a control for both organizational size and degree of professional training suggests that little of the effects of the context on throughput is attributable to the intervening effects of these variables (Table 12-6).

Instrumental Orientation. Our indicator of the effectiveness of the American public school in inculcating an instrumental orientation is admittedly quite indirect. However, it has seemed plausible to argue that the percent of students who have been set back behind their age cohort measures at least in part a failure of the organization to socialize the student effectively.

As in the case of school reading retardation and IQ measures, the percent of pupils who are at least one grade behind their age cohort varies as anticipated by social class and regional context but not by the metopolitanizational contexts (Tables 12-7 and 12-8). Again the central city-social class interaction effect is significant for all three types of schools (Table 12-6), and all results are unaffected by a further control for organizational size and the degree of professional training (Table 12-9).

Modernization Context and Production Output

In open-systems terminology production output is the product being exported by the organization to its environment. Whereas throughput is the raw materials in the condition of being transformed, output is the final state of throughput, the state at the time it is officially released by the organization to its environment. As we have noted in Chapter Four, for the American public school system output occurs at the time the student's relationship with the secondary school is formally terminated. Such termination takes three basic forms: negative (dropping out prior to graduation from the twelfth grade), neutral (graduation from the twelfth grade and direct entry into adult life), and positive (graduation from the twelfth grade and direct entry into an organization of higher education). It is our assumption that organizational output which is most effective in terms of the requirements of the larger society in contemporary America is that which minimizes negative termination and maximizes positive termination.

In this section, consistent with our working hypothesis, we anticipate that the more modern the sociocultural context of American public schools, the more effective their organizational output. In so doing we will confine ourselves to only the senior high schools as defined in Table 9-10 and to only negative and positive termination. As an indicator of negative termination we have chosen from the SCS data the proportion of

Table 12-6. Tenth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and Mean School IQ (With the Linear Effects of Organizational Size and Input Specialization Removed), by Type of Public School.

Sociocultural Context Variable	Type of Public School Elementary (N=1512)	 Junior High (N=810)	 Senior High (N=1024)
Main Effects:			
More Modern Region (R_1)	2.8*	0.5	1.4
Metropolitan: Ring (M_1)	0.3	2.5*	0.6
Metropolitan: Central City (M_2)	-3.4*	-2.4*	-3.0*
High Social Class (S_1)	10.3*	9.4*	5.1*
Interaction Effects:			
R_1M_1	-1.1	-0.6	0.1
R_1M_2	-0.6	0.4	-0.0
R_1S_1	1.4*	0.4	-0.4
M_1S_1	-2.2*	-0.6	-0.1
M_2S_1	-3.4*	-2.9*	-1.5
Predicted Mean for Least Modern Context	100.1	99.3	99.2

* $p < .05$

Table 12-7. Mean Per Cent of Pupils at Least One Grade Behind Their Age Cohort, by Type of Public School and Sociocultural Context.

Sociocultural Context			Type of Public School					
			Elementary		Junior High		Senior High	
Region	Metropolitanization	Social Class	Mean	N	Mean	N	Mean	N
More Modern	Central City	High	6.0	146	7.0	104	7.9	111
		Low	17.2	197	20.4	93	16.1	99
	Ring	High	6.3	286	6.2	210	6.4	240
		Low	10.5	199	10.3	99	8.5	149
	Non-Metro.	High	7.9	73	8.4	54	6.3	62
		Low	12.4	113	15.1	37	8.5	66
Less Modern	Central City	High	9.5	84	9.3	46	8.5	46
		Low	20.1	91	20.5	48	25.3	31
	Ring	High	7.0	107	7.8	74	7.2	88
		Low	14.6	90	11.5	47	10.4	51
	Non-Metro.	High	7.8	94	7.0	54	7.0	72
		Low	13.2	218	12.0	60	10.2	134
All Contexts			10.9	1698	10.4	926	9.1	1149

Table 12-8. Eighth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Pupils at Least One Grade Behind Their Age Cohort, by Type of Public School.

Sociocultural Context Variable	Type of Public School Elementary (N=1698)	Junior High (N=926)	Senior High (N=1149)
Main Effects:			
More Modern Region (R_1)	-2.7*	-1.2	-3.0*
Metropolitan: Ring (M_1)	-0.7	-1.6	0.2
Metropolitan: Central City (M_2)	2.9*	3.7*	6.3*
High Social Class (S_1)	08.4*	-8.1*	-7.1*
Interaction Effects:			
R_1M_1	1.0	1.7	0.2
R_1M_2	1.4	1.7	1.7
R_1S_1	-0.7	0.7	-1.4
M_1S_1	0.3	-1.1	0.3
M_2S_1	3.2*	3.3*	4.3*
Predicted Mean for Least Modern Context	13.3	12.1	10.4
F-Ratio	23.1*	18.5*	16.8*
Multiple R	.33	.39	.34

* $p < .05$

Table 12-9. Tenth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Pupils at Least One Grade Behind Their Age Cohort (With the Linear Effects of Organizational Size and Input Specialization Removed), by Type of Public School.

Sociocultural Context Variable	Type of Public School Elementary (N=1634)	 Junior High (N=867)	 Senior High (N=1084)
Main Effects:			
More Modern Region (R_1)	-2.8*	-1.2	-2.8*
Metropolitan: Ring (M_1)	-1.6*	-2.7*	0.1
Metropolitan: Central City (M_2)	2.0*	2.3	6.5*
High Social Class (S_1)	-8.0*	-8.5*	-6.9*
Interaction Effects:			
R_1M_1	0.8	1.5	0.2
R_1M_2	1.6*	1.9	1.7
R_1S_1	0.6	0.8	-1.3
M_1S_1	0.1	-1.3	0.2
M_2S_1	2.6*	3.2*	4.3*
Predicted Mean for Least Modern Context	11.2	10.7	10.8

*$p < .05$

former tenth graders who "drop out" prior to graduation from the twelfth grade.[6] As one indicator of positive termination we have chosen the proportion of twelfth-grade graduates who go directly on to a four-year college or university.[7] Finally, as a more comprehensive summary of the organizational output of American senior high schools, we have computed the proportion of previous tenth grade pupils who graduate from the twelfth grade and then go directly on to some form of higher education.[8] This last indicator of production output takes into account simultaneously both positive and negative termination.

If within the senior high schools any one of the three modernization context variables bears a nonrandom independent association in the predicted direction with any of our measures of organizational output, we will claim support for our working hypothesis. However, as in the case of organizational throughput we need to be alert for relationships more complex than those which we have anticipated and will thus examine all first-order interactions among the three modernization context variables.[9]

Negative Termination. The ineffectiveness of the school in exporting a product required by the larger society, as measured by the dropout rates of senior high schools, varies greatly from one sociocultural context category to another. Most consistent is its relationship with social class contexts. When the effects of the regional and metropolitanizational contexts are held constant through cross-tabulation, in five of six instances, the average senior high school in the high social class context has a smaller percentage of dropouts than does the comparable school in the low social class context (Table 12-10). Similarly, when the effects of the social class and metropolitanizational contexts are held constant, in four of six instances the average school in the more modern region has a smaller percentage of dropouts than does the comparable school in the less modern region (Table 12-10). However, the pattern with respect to the metropolitanizational context variable deviates from that which was expected and suggests again an interaction between the central city and low social class context.

To summarize the main and interaction effects of sociocultural context on negative termination, a least squares regression analysis with dummy main and interaction terms was conducted and is presented in Table 12-11. There it can be noted that the social class and regional main effects are significant in the expected direction. However, the effects of the central city-social class interaction term is also significant. On the basis of these results we claim support for our expectations regarding production output with respect to the social class and regional contexts, but not with respect to the metropolitanizational context. When the relationship between the sociocultural context and negative termination is re-examined, with the linear effects of organizational size and degree of professional training removed, the original expectation continues to receive support (Table 12-12).

Table 12-10. Mean Per Cent of Former Tenth Graders Who "Dropout" Prior to Graduation from Senior High School, by Sociocultural Context.

Sociocultural Context				
Region	Metropolitanization	Social Class	Mean	Number of Schools
More Modern	Central City	High	9.2	105
		Low	17.9	95
	Ring	High	5.1	239
		Low	7.4	150
	Non-Metro.	High	7.7	58
		Low	7.2	63
Less Modern	Central City	High	11.2	45
		Low	19.9	30
	Ring	High	7.0	85
		Low	10.7	49
	Non-Metro.	High	6.6	73
		Low	10.6	131
All Contexts			9.0	1123

Table 12-11. Eighth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Former Tenth Graders Who "Dropout" Prior to Graduation from Senior High School.

Sociocultural Context Variable	Coefficient (N=1123)
Main Effects:	
Modern Region (R_1)	-2.4*
Metropolitan: Ring (M_1)	-0.5
Metropolitan: Central City (M_2)	6.6*
High Social Class (S_1)	-6.2*
Interaction Effects:	
R_1M_1	0.7
R_1M_2	0.4
R_1S_1	-1.0
M_1S_1	0.6
M_2S_1	3.4*
Predicted Score for Least Modern Context	10.2
F-Ratio	27.7*
Multiple R	.43

* $p < .05$

Table 12-12. Tenth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Former Tenth Graders Who "Dropout" Prior to Graduation from Senior High School (With the Linear Effects of Organizational Size and Input Specialization Removed).

Sociocultural Context Variable	Coefficient N=1058
Main Effects:	
Modern Region (R_1)	-2.4*
Metropolitan: Ring (M_1)	-1.2
Metropolitan: Central City (M_2)	5.3*
High Social Class (S_1)	-6.4*
Interaction Effects:	
R_1M_1	0.5
R_1M_2	0.2
R_1S_1	-0.9
M_1S_1	0.6
M_2S_1	3.5*
Predicted Mean for Least Modern Context	9.6

*$p < .05$

Positive Termination. One of the more traditional measures of the output of a senior high school has been the percent of its graduates who go on to a four-year college or university. However, this is a rather traditional (as opposed to modern) conception of organizational output for schools, which fails to consider a school's contribution in terms of preparing students for all post-secondary forms of vocational and technical training important in a modern society. In addition, such a measure fails to acknowledge a recent educational pattern where many students enter a two-year college immediately after graduation from the twelfth grade with the intention of transferring to a four-year college or university two years later.

In spite of these limitations we chose to include this measure of the output of schools for illustrative purposes in examining the effects of the social context upon production output. As expected, the social class context effect is very pronounced, with the percent of graduates going directly to a four-year college from schools in the high social class category being consistently greater than the corresponding percent from schools in the low category (Table 12-13). However, the difference between the percentages for the two social class contexts varies from a low of 5.8 percent in the non-metropolitan areas of the more modern region to a high of 20.7 percent in the central cities of the more modern region. What is particularly interesting, and not as predicted by the working hypothesis, is the fact that when holding constant metropolitan and social class contexts by cross-classification, for all six instances of regional comparisons the percent of graduates going on to a four-year college in the less modern region is greater than that for the more modern region. This suggests that there is greater organizational emphasis in the less modern regions on four-year college attendance directly after secondary schools than there is in the more modern regions. We will comment more on this in Chapter Fourteen.

The least squares regression summary of the data upon which Table 12-13 is based has been presented in Table 12-14. There it can be observed that the social class context effect is significant as predicted by the working hypothesis, and that the region effect is also significant but in a direction opposite from that anticipated. Furthermore, the social class interaction effects with both region and the central city are significant. As in the case of negative termination, all these relationships between the sociocultural context and positive termination are basically unaffected by either organizational size or the degree of professional training (Table 12-15).

Composite Production Output. As noted above, a relevant summary indicator of the production output of American public schools is a composite one which takes into account simultaneously both negative and positive termination. In addition, the span of alternative forms of higher education included in a definition of positive termination must be broad

Table 12-13. Mean Per Cent of Senior High School Graduates Going Directly on to a Four-Year College or University, by Sociocultural Context.

Sociocultural Context			Mean	Number of Schools
Region	Metropolitanization	Social Class		
More Modern	Central City	High	41.7	106
		Low	21.0	100
	Ring	High	39.7	237
		Low	24.8	146
	Non-Metro.	High	33.0	59
		Low	27.2	65
Less Modern	Central City	High	42.4	46
		Low	25.9	33
	Ring	High	42.9	85
		Low	27.1	50
	Non-Metro.	High	40.9	74
		Low	29.4	132
All Contexts			33.5	1133

Table 12-14. Eighth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Senior High School Graduates Going Directly on to a Four-Year College or University.

Sociocultural Context Variable	Coefficient (N-1133)
Main Effects:	
Modern Region (R_1)	-2.6*
Metropolitan: Ring (M_1)	1.1
Metropolitan: Central City (M_2)	0.1
High Social Class (S_1)	17.6*
Interaction Effects:	
R_1M_1	-1.0
R_1M_2	-1.1
R_1S_1	0.6
M_1S_1	-3.1*
M_2S_1	-5.3*
Predicted Score for Least Modern Context	30.0
F-Ratio	25.8
Multiple R	.41

* $p < .05$

Table 12-15. Tenth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Senior High School Graduates Going Directly on to a Four-Year College or University (With the Linear Effects of Organizational Size and Input Specialization Removed).

Sociocultural Context Variable	Coefficient (N=1067)
Main Effects:	
Modern Region (R_1)	-4.2*
Metropolitan: Ring (M_1)	-0.9
Metropolitan: Central City (M_2)	-2.7
High Social Class (S_1)	15.5*
Interaction Effects:	
R_1M_1	-0.4
R_1M_2	-0.6
R_1S_1	-0.5
M_1S_1	-3.0*
M_2S_1	-5.0*
Predicted Mean for Least Modern Context	24.1

*$p < .05$

enough to tap, not just direct attendance at four-year colleges or universities, but the variety of forms of higher education which are required by contemporary American society. As described earlier, our composite measure of production output accomplishes this.

The independent effects of this compositive measure of the effectiveness of production output appear to be relatively great by social class context, somewhat strong by region, and only slight by metropolitanizational context. For example, when the regional and metropolitanizational contexts are held constant by cross-tabulation, in all six observable instances the average school in the high social class context has a greater percentage of former tenth grade students going directly on to some form of higher education than does the comparable school in the low social class context (Table 12-16). Similarly, when the metropolitanizational and social class contexts are held constant, in five of six possible regional comparisons the more modern region has a greater percentage going on than does the less modern region--the only exception being in the high social class contexts of the non-metropolitan areas.

The pattern with respect to the independent effects of the metropolitanizational context variables appears to be much more complex. The expected relationship that the central city would be more effective than the ring which is more effective than the non-metropolitan areas is found only in the high social class contexts of the less modern region--in the low social class contexts of the same region just the opposite relationship is found. In the comparable settings within the more modern region two entirely different patterns can be observed. In the high social class contexts the ring has the highest percentage of former tenth graders who go directly on to some form of higher education, followed by the central city and then the non-metropolitan areas. In the low social class context of the same region the ring and non-metropolitan areas are rather comparable on our composite output measure with the central city exhibiting a less effective output (Table 12-16). As in the case of negative and positive termination, the social class and metropolitanizational contexts appear to interact in their effects on production output.

Table 12-17 presents a further summarization of the data presented in Table 12-16. There it can be observed that the independent effects of the social class and regional context variables on the composite production output measure vary as expected and are statistically significant --the more modern the sociocultural context, the more effective the production output. However, although the ring can be observed to be more effective (as expected) than the non-metropolitan areas, the central city is not observed to be more effective than either the non-metropolitan areas or the ring.

Three of the five possible interaction effects are also statistically significant. The ring in the less modern region and the non-ring in the more modern region are less effective than would be predicted from a purely additive model. In a similar fashion the ring of low social class and the

Table 12-16. Mean Per Cent of Former Senior High School Tenth-Grade Entrants who Graduate from the Twelfth Grade and go Directly on to Some Form of Higher Education, by Sociocultural Context.

Sociocultural Context				
Region	Metropolitanization	Social Class	Mean	Number of Schools
More Modern	Central City	High	62.1	94
		Low	41.6	90
	Ring	High	64.4	221
		Low	50.6	135
	Non-Metro.	High	51.6	56
		Low	50.0	60
Less Modern	Central City	High	59.6	42
		Low	38.5	27
	Ring	High	57.7	82
		Low	43.2	42
	Non-Metro.	High	56.7	62
		Low	47.1	98
All Contexts			54.3	1009

Table 12-17. Eighth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Former Senior High School Tenth-Grade Entrants who Graduate from the Twelfth Grade and go Directly on to Some Form of Higher Education.

Sociocultural Context Variable	Coefficient (N=1009)
Main Effects:	
Modern Region (R_1)	5.2*
Metropolitan: Ring (M_1)	2.6*
Metropolitan: Central City (M_2)	-0.9
High Social Class (S_1)	18.1*
Interaction Effects:	
R_1M_1	-4.1*
R_1M_2	-1.9
R_1S_1	1.6
M_1S_1	-4.4*
M_2S_1	-7.8*
Predicted Score for Least Modern Context	47.9
F-Ratio	24.8*
Multiple R	.43

* $p < .05$

non-ring of high social class are less effective. However, the most pronounced interaction effect is clearly that between the central city and low social class contexts of these senior high schools. A re-examination of Table 12-16 shows something of the magnitude of the interaction. In the central cities of both the more and less modern region the difference by social class context between the percentage of former tenth graders who, after finishing the twelfth grade, go directly on to some form of higher education is at least 20 percent (62.1 versus 41.6 percent in the more modern region, and 59.6 versus 38.5 in the less modern region). However, within the rings these differences are approximately 14 in each region, while in the non-metropolitan areas the difference is only 2 percent in the more modern region and 9 percent in the less modern region (Table 12-16). Thus, with respect to our composite output measure the social class context represents very different effects for organizations in different metropolitanization areas. *In those areas where organizations of higher education are generally most accessible geographically to secondary schools, social class context differences appear to have the greatest impact on organizational effectiveness.* Furthermore, such an interaction effect is only slightly diminished when the possible intervening effects of the organizational size and degree of professional training are removed (Table 12-18). We will return to consider these findings further in Chapter Fourteen.

Summary

Analyses using three separate indicators of production *throughput* (in three types of schools) have been made based upon the working hypothesis that the more modern the sociocultural contexts of schools, the more effective their throughputs in terms of the requirements of the larger American society. By and large expectations based upon the working hypothesis have been confirmed with respect to regional and social class contexts for each type of school, but not with respect to the different metropolitanization contexts. Consistently, throughputs have been observed to be least effective in the central city (what has been assumed in Chapter Six to be the most modern metropolitanizational context category). In addition, a consistent interaction effect between the central city and low social class context categories has been observed, serving to depress even further the throughput effectiveness of schools in such settings.

A similar expectation regarding production *output* was tested using only three- and four-year senior high schools. Again, the results were as anticipated with respect to the social class context of the schools. The results for the regional context were consistent with our expectations when the output measure was tapping either negative termination or a broad definition of positive termination. However, when positive termination was defined in a rather "traditional" way (as simply the percent of twelfth-grade graduates who go directly to a *four-year* college or university), the more modern region was observed to be "less effective" than the less

Table 12-18. Tenth-Order Unstandardized Regression Coefficients for the Relationship of Sociocultural Context and the Per Cent of Former Senior High School Tenth-Grade Entrants who Graduate from the Twelfth Grade and go Directly on to Some Form of Higher Education (With the Linear Effects of Organizational Size and Input Specialization Removed).

Sociocultural Context Variable	Coefficient (N=959)
Main Effects:	
Modern Region (R_1)	4.1*
Metropolitan: Ring (M_1)	1.5
Metropolitan: Central City (M_2)	-2.9
High Social Class (S_1)	16.4*
Interaction Effects:	
R_1M_1	-3.8*
R_1M_2	-1.8
R_1S_1	1.7
M_1S_1	-3.7*
M_2S_1	7.1*
Predicted Mean for Least Modern Context	42.7

* $p < .05$

modern region. In terms of the metropolitanizational context categories, negative termination is significantly greater in the most modern category (the central city) and a composite measure of organizational output is significantly greater in the second most modern category (the ring). Neither of these results was exactly as expected. Particularly noticeable with respect to production output was an interaction between the social class and metropolitanizational context variables, with negative termination being greater and positive termination being less in the low social class contexts of the central cities.

In the case of both production throughput and output the effects of the sociocultural context of schools were found to vary little when the possible intervening effects of measures of organizational structure inputs were considered. The effects of context on throughput and output appears to be quite direct and relatively independent of organizational structure and inputs as they have been defined and measured in this empirical inquiry. After presenting in Chapter Thirteen some of the limitations of the theory and method utilized in this report, we shall return in Chapter Fourteen to consider some of the implications of these findings (as well as those presented in Chapters Ten and Eleven) for the sociological study of education and the equalization of educational opportunity in contemporary America.

Notes and References (12)

1. See Appendix B, School Questionnaire, Item 5f.

2. See Appendix B, School Questionnaire, Item 11.

3. See Appendix B, School Questionnaire, Item 5e.

4. A one-tailed test of statistical significance will be used in the case of those main effects which are in the predicted direction. Any main effects which are not in the predicted direction, along with all interaction effects, will be considered using a two-tailed test.

5. See Chapter Ten (especially Table 10-4) for a discussion of some of the details of this statistical technique.

6. The School Questionnaire asked about male and female dropouts separately. In computing a school dropout rate the two rates were weighted by the sex ratio of the school and then averaged. (See Appendix B, School Questionnaire, Items 20a and b.) A far more comprehensive measure of negative termination in American public education would take into account pre-tenth grade dropouts, but the SCS data did not permit the construction of such a measure.

7. See Appendix B, School Questionnaire, Item 19a.

8. To compute the number of former tenth graders, the number of twelfth-grade graduates reported in Item 19 of the School Questionnaire was divided by one minus the weighted average of the male and female dropout rates reported in items 20a and b. Then, to obtain the number of twelfth graders going on to any form of further schooling, the number of twelfth graders reported in item 19 was multiplied by the sum of the proportions reported in items 19a, b, and c. The ratio of the latter result to the former constituted our measure of the proportion of former tenth graders going directly on to some form of higher education.

9. A one-tailed test of statistical significance will be used in the case of those main effects which are in the predicted direction. Any main effects which are not in the predicted direction, along with all interaction effects, will be considered using a two-tailed test.

Chapter Thirteen. Limitations of Theory, Data, and Method

In the previous chapters of this report we have attempted to conceptualize a rather unique perspective of the American school, one which views it as an open sociocultural system highly dependent upon its environment. In addition, we have defined that environment in terms of its degree of modernity and have hypothesized a relationship between aspects of the school as an open system and the extent to which its environment has been influenced by the modernization process. We then tested a portion of this model through a secondary analysis of data from a national sample of American public schools. We have done this with the objective of understanding more clearly some of the forces which currently impinge upon schools and which deny equality of educational opportunity to many Americans.

Before considering the implications of these endeavors, both for the sociological study of education and the reform of American public education, it may be well to note some of the limitations already apparent within our work, limitations which will need to be overcome before a more complete understanding of the school as an open social system can be achieved. These limitations occur particularly with respect to: a) our consideration of the environments of schools, b) our consideration of the school as an open system, c) sampling errors, d) measurement errors, and e) uncontrolled extraneous variation. However, before turning to these specific limitations, it is important to note one rather general one.

We are keenly aware that several of our major assumptions regarding the nature of society and of the school as a social organization are at variance with some of the more widely accepted theoretical approaches to the study of the school in American society. While sources relevant to our approach have been documented in Chapters Two, Three and Four, the fact remains that we have not attempted to explicate every theoretical assumption which has served as the basis for the development of our model. This limitation seems justifiable on the pragmatic grounds that our analysis is admittedly exploratory and the model itself was developed to furnish a macroscopic perspective capable of handling research findings on education from diverse sources. It was not intended to be a new "theory." Rather, our approach was eclectic in nature. Although, in doing this, we have gained considerable insight into the relationship between the school and its sociocultural environment, the model is admittedly limited and, as our analysis has shown, can profit from both revision and elaboration to take into account inconsistencies already apparent.

The Environment of American Schools

Our exploration of variation in the structure and functioning of American schools has placed a heavy emphasis on the effects of the sociocultural contexts (i.e., environments) in which schools are located. We argued in Chapter Two that these contexts can be conceptualized and defined in terms of a variety of geographical areas and political subdivisions of differing degrees of modernity. However, we were particularly limited in our documentation of the validity of such an assertion by the absence of appropriate data. Our own comparison of 48 states in 1960 in terms of their degree of modernity as measured by five indicators (Chapter Two) is obviously only an example of the type of evidence which is required. Particularly disappointing to us has been the fact that data on the consumption of inanimate forms of energy (a measure central to distinctions in degree of modernity in cross-cultural studies) simply are not available for meaningful geographical areas and political subdivisions within the United States.

However, it is important to emphasize that such manifest indicators of modernity, useful as they would have been, are of secondary importance to our conceptualization. We argued in Chapter Two that in studying American education, variation in urbanization, industrialization, specialization and economic development is secondary in importance to variation in values and ideology among different geographical areas and political subdivisions. Although later we reviewed a large body of literature which could document indirectly this assertion with respect to the sociocultural contexts of region, metropolitanization area and school-community social class, we were greatly limited by a lack of available direct evidence. More systematic data on variations within the United States in terms of such important value orientations as "morality" and "progress" will be required before this important assumption of our theoretical framework can be documented appropriately.

In addition to being limited by the need to document more thoroughly variation within the United States in the degree of modernity and in the values and ideology associated with it, our research has been restricted by a rather narrow definition of the concept of environment itself. We have focused on the environment of the school in terms of its region, the degree of metropolitanization of its community, and the social class composition of its student body. Although the explication of just these three contexts turned out to be a rather mammoth undertaking, a more complete treatment of the environment of American schools is desirable. Such a treatment would take into account such important additional sociocultural contexts as the "state" in which the school is located, the "school district" which governs the school, and the "school attendance zone" or "neighborhood" from which the pupils are drawn.

Particularly important to any attempts to measure the effects of such environments will be the need to distinguish between the present condition of the environment, its previous condition, and the rate of change between the two. Our conceptualization of the effects of the environment on schools was fairly static in that it took into account merely the present condition of the environment and did not allow for the possibility that rapid changes in the social composition of some environments (particularly certain central cities of the Northeast and Great Lakes regions and certain rural areas of the Southeast) which could modify their degree of modernity rather dramatically.

Particularly troublesome in this respect in our research has been the metropolitanization context variable. In Chapter Six, we argued that, on the average, the central cities of the United States represent a higher degree of modernity than do either the rings or the non-metropolitan areas. However, the frequent occurrence of interactions between the central city and low social class contexts noted in Chapter Twelve raises doubts about the validity of this assumption. A conceptualization of the metropolitanization context variable which takes into account the impact upon the central city of migration which can result in a "ruralization of the city," as well as other factors such as ethnic composition, race, primary economic base, and the like seems essential. For it can provide a clearer conceptualization of the influence of modernity on both rural and urban life and can provide a more complete understanding of the organization-environment relationship within schools.

The American School as an Open System

In conceptualizing the American school as an open system, we have utilized primarily a wholistic or organic framework. Our justification for such a framework, in contrast to the more commonly accepted behavioristic or mechanical conceptions of social behavior, is handicapped by a paucity of empirical documentation at the subsocietal level. This is particularly true of research on the school. Almost all past research on the school has focused on a role (e.g., pupil, teacher, or principal) as the unit of analysis rather than on the school itself. Nevertheless, whenever appropriate systematic evidence on schools has been available, we have provided it, but we have also drawn upon our own personal observations of schools. Clearly, a more complete documentation of the properties of open systems which we attribute to the American public school is required.

Also worth noting carefully is the manner in which we have related the structural characteristics of the school as an open system to the modernity of its sociocultural environment. In characterizing public schools as open systems (Chapter Four), we identified five subsystems (maintenance, production, boundary, adaptation and managerial) which we argued would vary in importance according to the extent of modernity of the sociocultural environment in which a school is located. This assertion could not be documented given the limitations of our data, nor could we draw upon a great deal of previous research directed at the conceptual level of the school. (Most research on the relationship of the school to the community has tended to be cast within a behavioristic framework and so the data collected and procedures used to collect it are not particularly amenable to interpretation from a wholistic perspective.) Nevertheless, it seems to us that inferential support for our assertion can be derived from our own findings in Chapter Ten which suggest a great deal of promise for future research efforts in this direction. However, future efforts will require not only further explication of the subsystems and their sensitivity to the modernization process, but also the development of empirical referents and procedures for data collection which will measure the patterns of subsystem relationships in a more direct fashion than was possible in the present study.

Another aspect of the school as an open system which needs more systematic development is the extent to which schools as social systems are open, in both comparative and absolute terms. While we have argued that all social systems are "open," we have not attempted to posit any variation in openness across different types of schools. Yet it seems reasonable to expect, for example, that public and non-public schools would differ appreciably in their openness to environmental influences. Future efforts directed at the school as an open system should include a more systematic delineation of the "parameters" of the openness of schools as social systems in differing institutional contexts. Such specificity will undoubtedly contribute to a clearer understanding of the effects of various sociocultural forces upon different types of schools.

A problem of some magnitude which we now see as a possible limitation of this study is the manner in which we have excluded pupils from membership in the school as a social organization, and then defined them as the "raw materials" acted upon by the school. In the case of the exclusion of pupils from membership, we readily acknowledge the possibility that this can be construed as "unrealistic" from some perspectives, for obviously a great deal of intra-school activity and interaction includes pupils in one way or another. On the other hand, by excluding pupils from organizational membership it was possible to focus more sharply on those organizational properties of schools shared with other social organizations. Further, in addition to this analytic advantage, removing pupils from organizational membership has the heuristic value of permitting the reader to view the school more clearly in terms of its institutional role than is possible when students are defined within organizational boundaries. We perceive the decision, as to whether or not pupils should be considered organizational members, to be a very complex one and dependent upon the purposes of the analysis.

Related to this issue is the inherent limitation associated with defining pupils as production throughput or "raw materials." To do so, of course, imputes to the student body an inanimate nature obviously inconsistent with what we know of pupil-school relations. While for preliminary analyses, such as that performed in this study, it seems useful to view the student body in such a fashion, ultimately it will be necessary to weigh carefully alternative conceptualizations of the pupil-organization relationships which will be consistent with the wholistic model of the school in society set forth in this study. It is possible that a greater use of analogies may offer creative insights into this issue. For example, pupil-organization relationships may be likened to those of "plants" in a nursery, for pupils, like plants, are subject to the artificial environment of the school wherein certain genetic characteristics are developed to a degree not normally achieved in their "natural environments." Such an analogy can be carried a step further for, like some nurseries, the school returns the pupils to their natural environments periodically. A different analogy, suggestive of a more active pupil-organization relationship, might conceptualize the relationship as being similar to that between animals and a circus in that the behavior of school pupils, like that of circus animals, can be in opposition to that intended by their trainers.

The use of analogies, such as those presented above, are useful for they suggest possible properties of the pupil-organization relationship which might otherwise be overlooked. It is quite possible that under different environmental conditions different analogous models may best resemble the pupil-organization relationship as it exists. Perhaps what is required is a conceptualization of the pupil-organization relationship which specifies the conditions under which particular properties of this relationship are most operative. The fact that we have not yet been able to provide such a conceptualization should not negate the heuristic value of our model as one approach to the organizational analysis of schools as open social systems.

Sampling Error

Past research on the school as a formal organization has been characterized by two major limitations: the tendency to overgeneralize from case studies of only a few schools, and the use of pupils or teachers as the unit of analysis when the primary focus is on the school itself. In our efforts to avoid these limitations we obtained data from a national sample of schools in testing our conceptualization of the organization-environment relationships of schools. However, although this sample was very large by contemporary standards, our approach has not been without its own limitations.

Ideally in studying the organization-environment relationship one would draw a large probability sample of schools which had been stratified on several sociocultural context variables in terms of a series of categories of differing degrees of modernization. Complete cooperation from all sampled schools would be essential for in this way accurate estimates of sampling errors could be made and reported.

Unfortunately, the empirical portions of this report are based upon neither a stratified probability sample nor a 100 percent response rate. The sample of 7,771 schools with which we have worked arose through the probability sampling of households, not schools, and the response rate was only 73 percent. Although we have carried out a series of detailed analyses which show that this sample is fairly representative of the larger population and is unlikely to produce bias in the test of the working hypothesis (see Appendix A), the problem remains that the sampling errors are basically unknown and thus limit greatly the type of generalizations which can be made on the basis of results apparent within these 7,771 schools.

It should be noted, however, that there are currently many rather formidable obstacles to the obtaining of a more scientifically defensible sample of American schools. Although a roster of all public and private schools in the United States is currently available from the U. S. Office of Education, the schools on this roster have not been identified in terms of variables which would permit stratification on such important sociocultural contexts as the social class composition of the school district, or school attendance district. Such data are available for communities and census tracts from the U. S. Bureau of the Census, but the lack of correspondence between the areal units in which schools are located and governed and those for which Census data are available makes the complete identification of schools in terms of Census data impossible. Until such important background variables are available at the time a sample is being selected, the development of scientifically precise probability samples for investiting the organization-environment relationships of schools will not be possible.

It should also be noted that even if appropriate sampling data were currently available, research of this type would still be greatly inhibited by the reluctance of many public school officials to supply the type of "sensitive" data necessary for a comprehensive study of the organization-environment relationship. School officials, particularly those in what we have identified as the less modern areas of the United States, currently are reluctant to answer questions about the environment of their schools, and particularly about their structure, input, throughputs, and outputs. Thus, even if a scientifically sound sample could be drawn, the researcher would be greatly limited by selective nonresponse. Although efforts can be made, as was done in this study, to learn enough about the recalcitrant schools so that the responding portion of the sample can be weighted up, the data required to do this are generally also under the control of school officials. Barring a sudden shift in the willingness of public school officials to supply the necessary data, the existence of unknown sampling errors due to selective nonresponse are likely to continue to limit the type of generalizations which can be made regarding the organization-environment relationships of American schools.

Measurement Error

In addition to being limited by those problems of conceptualization and sampling already noted, our efforts to explore empirically the environment-organization relationships of schools were limited by measurement errors with respect to variables describing both the organization and its environment. One consequence of such error is that coefficients summarizing the relationship between measures of the environment and of the organization have very likely been underestimated. This has not been a particular problem in this report, for the objective here was merely to explore the working hypothesis that environment and organization are related in a particular way. However, many scholars concerned with both the sociological study of schools and strategies for their reform will eventually want to ask more strenuous questions of data comparable to ours. Under such circumstances it will become extremely important that measurement errors which distort the fit between concepts and data be reduced below the level suggested in our data.

In Chapter Nine we noted that our measure of the degree of modernity of five geographical regions was limited by the fact that we could not combine American states at will. In our case we were limited by sampling considerations to combinations of the nine census divisions. However, a slightly better representation of variation in the modernity of five geographical regions could be obtained if sampling constraints permitted combining the states in the manner depicted in Figure 5-2.

Although we are convinced that the three SMSA categories represent the best currently available summarization of metropolitanizational differences among communities, such a measure now seems too crude for further research. Given a larger sample of schools than that which was available to us, it would seem desirable to develop categories of metropolitanization which differentiate among both central cities and ring areas in terms of their population density. In this way a more sensitive measure of the metropolitanization variable would be obtained.

Our third measure of the sociocultural context of schools was the social class composition of their student body. Here, because of the importance of occupation to social status within a highly modern society, we used a measure of the percent of pupils who come from white-collar families, and turned to the school principals for an estimate of this percentage within each school. We have defended our use of the principals' estimates in Chapter Nine and in Appendix D. Unless future investigations are able to obtain carefully enumerated descriptions of each pupil's family (such as are available from the Bureau of the Census), we suggest that the principals' estimates continue to be used when no more than four rough categories are required. Such a measure certainly seems preferable to one based upon an aggregation of the reports of pupils (particularly young pupils) about their fathers--reports which are subject to a good deal of misreporting.

The measures of the organization itself which we used in this report dealt with its structure, inputs, throughputs, and outputs. It was particularly encouraging to us that the relationships most consistent with the working hypothesis occurred with respect to measures of organizational size and specialization--measures which are likely to be subject to very little error. (In general, school principals know accurately how many teachers are assigned to their schools and what grade levels are under their responsibility). However, a more complete description of the structure of schools will require additional measures which tap such important dimensions as complexity and degree of bureaucracy.

Our measures of input were all at best merely indirect proxies for what we had conceptualized in Chapter Four as the organizational input of schools. Far more valid and reliable measures of school personnel could be obtained by submitting questionnaires to the teachers themselves and then aggregating their replies in order to characterize the school. Similarly, more systematic procedures than single questions addressed to the principal are needed to characterize the curriculum and plant of the school. It is probably necessary to make direct observations in each school to obtain appropriate data on these aspects of organizational input.

Probably the weakest measure utilized in the empirical portion of this report occurred with respect to throughput. Ideally one would want to obtain direct measures of pupil knowledge, skill, and orientations at several points in time. Particularly important would be measures of the knowledge, skill, and orientations possessed by the pupils at the time they entered the initial year of each type of school, and again at the time they completed the terminal years of the same schools. It is particularly important to note that such measures should not be of the normative type which are so typical of individual psychological assessment in American education. In characterizing the throughput of schools one needs to know the percentage of pupils at different stages within the organization who know a certain fact, possess a particular skill, and hold a particular orientation. The typical normative data does not provide this, and in relying on the principal's estimates of the percentage of pupils who were above a particular grade level in reading (a normative measure) we may have permitted a good deal of error to creep into our estimates. In addition, the particular variables which we selected as proxies for knowledge, skill and orientation were indirect at best. We now see a great need for an extensive effort to develop measures of various dimensions of pupil socialization by the organization, measures comparable in quality and scope to those which now exist for describing dimensions of the cognitive behavior of pupils.

Our measures of organizational output were more direct and no doubt more reliable. In most cases the high school principals reported that they could provide accurate estimates of the number of pupils going to to various forms of further education. However, our measure of negative termination (dropping out) was distorted by the fact that it included only those pupils who had dropped out after entering the tenth grade. This was necessary in our study because of the fact that close to 50 percent of the American schools having a twelfth grade do not contain a grade lower than the tenth and thus principals would not be aware of the degree of dropping out prior to the tenth grade. However, further research may want to concentrate more on 9-12, 7-12, and 1-12 schools in which a more comprehensive estimate of school dropout rates could be computed. In this way more complete data can be obtained for some of the less modern areas in which early dropping out is most frequent, thus providing a more accurate estimate of the strength of the environment-organization relationship.

It is particularly important to note that throughout our examination of the effects of the environment upon the school as a social organization, we have relied upon single items to measure key concepts. Given the exploratory nature of this research, and the fact that we were constrained by the lack of more comprehensive data, it did not seem appropriate to attempt to build summary measures. However, a more precise assessment of the strength of the relationship between the sociocultural contexts of schools and their organizational characteristics is desirable and will require the development of reliable summary measures of structure, input, throughput, and output.

Uncontrolled Extraneous Variation

In any survey of natural organizations there is always the possibility that variables other than those which have been conceptualized, measured, and introduced into the analysis are affecting the relationships under examination and thus are confusing the interpretation of results. To guard against this possibility we have gone to great lengths to make simultaneous distinctions among the three sociocultural contexts of region, metropolitanization, and school-community social class. By so doing we could identify their independent effects on the structure and functioning of schools, and thus not confuse, for example, regional effects with metropolitanizational effects. In general we have found that each of the three sociocultural contexts bears an association with measures of organizational structure and functioning above that attributable to either of the other context measures with which it is correlated. However, the possibility still remains that the "independent" effects which we have observed may be attributable to context variables such as "state" or "school district" which, as noted earlier, were not included in this study. In addition, there exists the possibility that due to the limitations of our sample size, our control on the three context variables (which was in the form of two dichotomies and one trichotomy) was not tight enough to reveal their "true" independent effects.

One important context variable for which we had data but on which we did not control is the racial composition of the schools. As noted in Chapter Nine, we did not view race as indicative of a rational component of the modernization process. Rather we saw it as being antecedent to social class in a developmental sequence and thus not cotemporal with social class as are, for example, region and metropolitan area. Nevertheless, as we noted in Chapter Nine, the racial and social class composition of schools are correlated and had our sample of predominantly nonwhite schools been larger we might have been able to examine the effects of sociocultural contexts independent of the racial composition of the schools. However, it is important to note that the J-shaped distribution of the racial composition variable in its natural form (see Table 9-8) makes such a control extremely difficult, regardless of sample size.

In studying the effects of context on organizational inputs in Chapter Eleven we have attempted to control for the possible "extraneous" effects of structure. To do this we entered a measure of organizational size into all regression equations for context on input. This seemed to us to be a meaningful way in which to go about this, but it is obviously limited by the extent to which our measure of size actually captures the essence of what we described in Chapter Four as the organizational structure of schools. A far more rigorous test of the effects of context on input, which are independent of structure, would require the prior introduction of a summary or composite measure of the several dimensions of structure.

A similar criticism can be leveled at our control for input in looking at the context-throughput and context-output relationships in Chapter Twelve. However, our controls in this case may not be as weak as they may at first seem, for the results of our analysis are rather similar to those of others who have also found that the context-output relationship is affected very little by the introduction of variables similar to those which we have conceptualized and measured as organizational structure and input.[1]

One major limitation in our attempts to study the context-organization relationship is the result of our inability to control for changes taking place in the environment of the schools. In extending our work, a more precise characterization of the environment at prior points in time will be required. Because of the unexpected observance of interaction effects among the several context variables (particularly with organizational output), it has become quite apparent that the effects of changes in the environment of schools are likely to act in different ways upon organizational structure, input, throughput, and output. Structure seems only slightly affected by change in the environment. (Once a school with a particular number of classrooms is built it is not easily changed.) Thus organizational size is likely to be more highly related to a condition of the environment at the time a school was built than to that of the present.

Inputs also seem to lag behind changes in the environment. However, what is particularly apparent is that throughputs and outputs are very sensitive to changes (see Chapter Twelve), particularly those with respect to the social class context of the school. Because we lacked measures of the context at different points in time we were unable to control for such changes and to examine systematically their differential effects upon organizational structure and functioning. In attempting to understand more fully the environment-organization relationship future studies will need to take into account very systematically this developmental nature of school environments as well as of the organization itself.

Notes and References (13)

1. See, for example, James S. Coleman, et al., Equality of Educational Opportunity, Vol. 1 (Washington, D. C.: U. S. Government Printing Office, 1966), Chapter 3.

Chapter Fourteen. Summary, Implications and Conclusions

In the preceding chapter of this report, limitations to the theoretical and methodological dimensions of our analysis were noted. While these limitations are both significant and suggestive of requirements for further research needed in this area, they do not preclude the identification of important substantive implications. In this chapter, we briefly summarize Chapters One through Twelve to provide an overview of the focus, theoretical orientation, and analysis performed. Subsequently, major implications of the results for education generally, and for the equality of educational opportunity in particular are discussed.

Summary

Chapter One introduced the nature of problem focus of this study--the lack of equal educational opportunity within American society. Varying meanings of the concept were considered, ranging from a definition of equal opportunity which emphasizes the individuals' responsibility to one that emphasizes the society's responsibility. Several reform practices and proposals stemming from these meanings were considered in terms of what the reformers saw to be a) the source of the problem and b) the most appropriate focus for change. Nine current reform practices or proposals were then categorized in terms of the individual, the educational system, and the social order. While a measure of evidence is available to evaluate those practices or proposals emphasizing the individual as either the source of the problem or the focus for change, there is little theory or evidence upon which to evaluate reform practices or proposals emphasizing the educational system or the social order. It was in part to meet this need that the subsequent theoretical model and data analysis presented in Chapters Two through Twelve was accomplished. In part, also, the purpose of the model and analysis was to permit a more macroscopic view of American education than is usually found in the research literature.

Modernization and Education. In Chapter Two we discussed the nature of modernization and its effects upon societies generally and upon American society specifically. The close relationship cross-culturally between modernization and educational processes was observed, and it was asserted that the basis for this relationship rests upon the technological requirements of modernizing societies. Specifically, we argued that technological development, as the basis for modernization, necessitates the development of particular skills and orientations on the part of the members of the society. Furthermore, because of the nature of these skills and orientations, they can best be instilled through the institution of formal education. We contended that requirements for personnel with appropriate skills and orientations underlie the close relationship between modernization and the characteristics of a system of formal education.

A second major consideration in Chapter Two concerned the uniformity of the modernization process within any society and we noted considerable variation in the manner in which modernization can and does occur within any society. Thus, modernization is a continuous transitional process wherein particular institutions or geographic areas are at different stages of modernization and are modernizing at different rates. This differential modernization process, along with the previously noted close relationship between education and technology, led us to suggest that different states within the United States could be characterized as being more or less modern. Drawing upon indicators used in cross-cultural research and upon U. S. Census data for 1960, an index of "modernization" was constructed, and 48 American states were ranked in terms of their degree of modernization. Subsequently, a correlation of the modernization score for those states with particular attributes of their educational system was performed and yielded results consistent with our earlier assertions.

On the basis of these findings we adduced that in contemporary American society modernization influences education, at least at the level of the state. We then reasoned that since modernization affects education at such a macroscopic level, it could also do so at the level of the school as a social organization. Thus, we asserted that the same conditions fostering or hindering modernization exist within states as well as among them, and that the concommitant development of formal education at the level of the school will vary in a similar manner. To explore this possibility, a more elaborate framework than that offered in traditional organizational theory was required--one that could take into account more systematically the nature of possible environmental influences upon the school as a social organization. We selected the "general systems approach" as set forth by Buckley, Katz and Kahn, and von Bertlanffy.

Open Sociocultural Systems. We introduced the concepts associated with a general systems approach in Chapter Three and related this approach to sociocultural systems in general. It was pointed out that sociocultural systems are purposive in nature and adaptive to environmental constraints. The purposive nature of the sociocultural system was seen as being determined by its institutional role, while its adaptive tendencies were explained in terms of its dependence as an open system upon its environment. Inputs to sociocultural systems were defined in terms of materials, personnel, and information, and were distinguished from production throughputs which were seen as the material and/or personnel acted upon by the sociocultural system. Likewise, the distinction was made between organizational outputs (the energies expended by the organization in the meeting of its organizational requirements) and production outputs (the transformed throughputs of the system). Homeostasis of the sociocultural system was defined in terms of the system's efforts to maintain itself in the face of institutional requirements and environmental constraints and pressures. Differentiation was viewed as being the tendency of the sociocultural system to develop into a more complex form. As a final step in this analogy between general systems and open sociocultural systems, five subsystems were identified as comprising the sociocultural system--maintenance, production, boundary, adaptation, and managerial. The first four subsystems were each seen to vary in importance with the nature of the environmental constaints and pressures, and the fifth was perceived to be more stable.

In Chapter Four the school was described in terms of these general characteristics of open sociocultural systems. Inputs were defined in terms of the materials, personnel, and information utilized by the school in its on-going activities. Production throughputs were identified as the "raw materials" acted upon by the school (i.e., the pupils). Organizational outputs were defined in terms of the energies expended by teachers, administrators, school board members, and other school personnel in meeting the organizational needs of the school and in fulfilling the school's institutional role. Production outputs were defined in terms of the pupils at a terminal level of the organization, since they are acted upon by it and are then released into the social environment.

The Environments of Schools. In Chapters Five, Six and Seven we considered selected aspects of the school's sociocultural environment (region, metropolitanization, and social class). We reviewed extensive literature concerning differences within American society on these dimensions. By so doing, two important factors were noted: first, that American society is not as homogeneous as is generally assumed; secondly, and perhaps of more importance, we described the manner in which variations in region, metropolitanization, and social class can influence the nature of the environmental context of the school and thus the school itself.

In Chapter Five, five regions were identified: the Northeast, the Southeast, the Great Lakes, the Plains, and the West. Although having some similarity in ideology and values, these regions were seen to vary in the relative emphasis given to particular beliefs and values which in turn is associated with their extent of modernization.

The ideology and values believed to be most consistent with modern sociocultural requirements are those associated with materialism and progress. It was also argued that the development of an elaborate technology in a society presupposes a willingness to manipulate the physical environment, as well as a belief that it can be done. These, plus the tendency to define "progress" in tangible and mechanistic terms, are essential ingredients in the development of a "modern sociocultural system," for they permit the continued development and exploitation of the technological means potentially available to any group. In the case of the regions, the Northeast, West and Great Lakes were thought to emphasize these characteristics to a greater extent than the Southeast and the Plains. Consistent with this expectation, we noted that the former three regions are much higher in terms of the modernization index than the latter two regions.

Specifically, the Northeast, being the most modern region, was seen to place the greatest emphasis upon material reward and progress; while the Southeast, as the least modern region, was seen to emphasize a traditional morality resistant to the modernization process. The emphasis in the Great Lakes region was seen to be associated with material success, equality and morality; the Plains region was seen to emphasize pragmatism and individualism; and the West was viewed as closely paralleling the Northeast, except for a greater emphasis upon individualism.

Chapter Six contained our discussion of metropolitanization and the affects of this process upon educational phenomena. Consideration was also given to the differences between rural or non-metropolitan life and urban or metropolitan life. These metropolitan-nonmetropolitan differences were considered to be important in determining the ideology and values characteristic of an area. The relation of these to community cohesion was also noted. Specifically, it was pointed out that in the non-metropolitan community, values and ideology served to unite the community and, therefore, take on a "sacred" quality. In contrast, the cohesion of metropolitan communities was based upon a "pursuent rationality" or cooperation in order to attain individual ends. In this type of community cohesion is maintained through an orientation based upon universalism, specificity and achievment. This type of cohesion was seen to be more consistent with the requirements of modern society and, accordingly, produced a more modern sociocultural context within which the school as a social organization exists.

Chapter Seven considered the nature of social class differences in American society. Within this chapter the definition of social class was considered, and research concerning both general class differences in American society and the effects of such differences upon education were cited. Social class differences were seen to be primarily the result of particular combinations of skills and orientations associated with the productive process. The consequences of such differences for education, we argued, are manifested primarily in different orientations. Relative to the educational system, middle class behavior is predicated upon social role orientations best described as universalistic, specific, affectively neutral, and achievement oriented. In the same context, lower class behavior was seen to be particularistic, diffuse, affective and ascriptive in nature. The former type of role orientation was characterized as being more "modern" (i.e., more consistent with the requirements of a complex, industrialized society), and the latter type characterized as being less so.

Research Design. Chapter Eight synthesized in brief fashion the conclusions reached in Chapters Five, Six and Seven regarding the nature of the influence of region, metropolitanization and social class upon education and integrated those conclusions with the model of the school as an open social system set forth in Chapters Three and Four. Drawing upon the discussion of the relationship of the modernization process to formal education in Chapter Two, the three environmental attributes were related to the school in terms of the extent to which they reflected the effects of the modernization process. In this chapter, the broad working hypothesis was advanced that the more modern the sociocultural context of the American public school, the more modern its organizational structure and functioning.

In Chapter Nine, the data used in the analysis were introduced. It was noted that these data were collected in 1965 by the U. S. Bureau of the Census as a minor part of the Equality of Educational Opportunity survey of the U. S. Office of Education. The sample of schools available for analysis was described in terms of the three modernization contexts (region, metropolitanism, and social class). Additionally, a preliminary analysis of the type of control and organizational arrangements was made to introduce the analytic methods employed and to demonstrate the feasibility of the more complex analysis subsequently performed in Chapters Ten, Eleven and Twelve.

Organizational Structure. Chapters Ten, Eleven and Twelve presented analyses of the data which dealt with particular aspects of the American public school as a social organization. In Chapter Ten, two aspects of organizational structure were considered--the size of the school and one form of structural specialization (the number of grades within the organization).

Based upon our working hypothesis that the more modern the sociocultural context of the American public school, the more modern its structure and function, it was anticipated that the more modern region, metropolitan area, and social class context would, on the average, have larger and more specialized schools. This expectation was supported by the results of the analysis performed. Schools in the Northeast, West and Great Lakes were, on the average, significantly larger than schools in the Plains or Southeast regions. The more metropolitan area, on the average, had the larger schools as well. So, also, did the higher social class schools tend to be larger, on the average, than the lower social class schools, with the notable exception of higher social class schools at the elementary and junior high levels in the central city. In both regional contexts these schools, on the average, were smaller than the lower social class elementary and junior high public schools in the central city (Table 10-3 and 10-5). One important exception to our expectations was reflected in the interaction effects of the social class and central city context. Important also were the interaction effects of region and central city upon school size (Table 10-5). Specifically, our data revealed that in metropolitan areas the difference in the size of schools of high and low social class was much greater in the more modern region of the country than in the less modern region.

Increased specialization of grade level was also found to be related to the modernization context (Table 10-7). Further analysis of the data for main and interaction effects of the three modernization contexts revealed a significant relationship existent in each case, independent of the effect of the other two contexts (Table 10-8). In particular, the metropolitan context contributed to the increased probability of age-grade specialization among the sample of schools. The interaction effects of regional, metropolitanization and social environments in all cases involved the social class context (Table 10-8). Specifically, the data indicate that the more modern the region and metropolitan area, the less effect social class context has upon organizational age-grade specialization.

Organizational Inputs. Chapter Eleven focused upon the effects of regional, metropolitanization, and social class contexts upon the personnel and material inputs into the American public school. Personnel inputs analyzed were the percent of teachers in the school with at least a master's degree and the percent of male teachers in the school. Material inputs included whether or not elementary schools have a centralized library, the presence of typing instruction in the junior high school, and the presence of a shop with power tools in the junior high school.

Results of the analysis reported in Chapter Eleven indicate that the more modern the region and the social class context, the greater the percentage of teachers in the average school with at least a master's degree. However, the effects of metropolitan area on this aspect of school input appear to be expressed indirectly through the size of schools (Table 11-13). So, also, the more modern region had significantly more male teachers in the average school than the less modern region. However, our analysis revealed that the effects of metropolitan area and social class context on teacher sex distribution were not as predicted. A higher proportion of male teachers, on the average, were found in the lower class schools than in the upper class schools, with the tendency for schools in the central city to have fewer male teachers than comparable schools in the ring or non-metropolitan areas (Table 11-4).

The three material inputs were also analyzed to determine the effect of modernization contexts upon organization specialization. The results indicated, as expected, that in the more modern metropolitan area, elementary schools, on the average, were more likely to have a centralized library than were those in the ring, while, in turn, schools in the ring were more likely to have a centralized library than were those in a non-metroplitan area. So, also, higher social class environments had a higher percentage of elementary schools with centralized libraries than lower class environments (Table 11-7). However, when the effect of the size of the school was removed, the influence of the metropolitan area was somewhat reduced (although still significant), while the effect of social class was increased (Table 11-9). Also, the less modern region had a significantly higher percent of elementary schools with a centralized library than did the more modern region.

Junior high schools with an emphasis upon typing were more common in the modern region (Northeast, West, and Great Lakes) than in the less modern region (Southeast and Plains). So, also, schools in the central city emphasized typing more than did schools in the metropolitan ring or non-metropolitan areas. Further, in all social class contexts except the central city in the modern area, schools in higher social class environments gave more emphasis to typing than did schools in lower class environments (Table 11-10). However, this difference between schools in differing social class environments was not statistically significant, nor were schools in the ring significantly different from schools in the non-metropolitan area with respect to this type of input (Table 11-11).

Finally, the input of a shop with power tools was found to vary signifcantly with all three modernization contexts in the manner predicted. The more modern region, the central city, and the higher social class schools were all observed to have a higher percentage of junior high schools with a shop with power tools than were their counterparts in less modern contexts (Table 11-13). Further analyses revealed significant interactions, for social class differences in the percentage of junior high schools having a shop with power tools are much greater in the metropolitan ring and non-metropolitan areas of the less modern region (but only in the non-metropolitan area of the more modern region), than in the central city (Table 11-14). These relationships persisted when the size of the school was controlled.

Production Throughput and Output. In Chapter Twelve the analysis centered on the effects of the three modernization contexts upon production throughputs and outputs in American public schools. Throughputs were measured by the percent of pupils in the school behind in reading at least one year (technical knowledge), the mean I.Q. of the students in the school (technical skill), and the percent of pupils in the school at least one year behind their age grade cohort (instrumental orientation). Production outputs were measured by the percent of school dropouts (negative termination), the percent of pupils who went on to a four-year college (traditional positive termination), and the percent of pupils going to any form of higher education, controlling for the percent of dropouts (composite positive termination). In all cases the effect of organizational size and input specialization (the percent of teachers in the school with at least a master's degree) was also controlled.

Technical knowledge varied between schools as anticipated with respect to region and social class. Specifically, schools in the more modern region and the higher social class context, on the average, had a significantly smaller percentage of students behind in reading than did schools in the less modern region and lower social class context (Table 12-1). This was not the case for metropolitan area differences, however. The metropolitan ring is not appreciably different from the non-metropolitan area on this measure of throughput. Further, the metropolitan central city area, on the average, has a greater percent of reading retardation than the other two areas (Table 12-1). An interaction between social class and the central city results in an apparent increase in the difference between the percent of pupils behind in reading in the lower and upper class schools within the central city in comparison to that noted between these same social class contexts in the metropolitan ring or non-metropolitan areas (Tables 12-1 and 12-3).

The effectiveness of the school in transmitting technical skill, as measured by average I.Q. scores, was found to be similar to the results obtained in the analysis of reading retardation (Table 12-4). Again, region and social class effects upon the school were as anticipated, and again metropolitan effects were in the opposite direction from that predicted (Tables 12-4 and 12-6).

The analysis of the transmission of an instrumental orientation, as operationally defined by the percent of students in the school behind their age-grade cohort, was found to be similar to the results noted in the case of technical knowledge and skill (Table 12-7). As in those cases, the effects of region and social class context upon the school were in the manner anticipated, while the effect of metropolitanization was in the opposite direction. Again, the interaction of the effect of the central city with social class resulted in greater differences between higher and lower class schools in the central city than in the metropolitan ring or non-metropolitan areas (Tables 12-7 and 12-9).

In examining the analysis of the effects of the three modernization environments on the production output of the schools, negative termination, in terms of the average number of dropouts, was observed to be as anticipated for region and social class, but in the opposite direction for metropolitan areas (Table 12-10). Specifically, it was observed that schools in the more modern region and higher social class contexts, on the average, had significantly fewer dropouts than did schools in the less modern region and of lower social class context (Table 12-12). The metropolitan ring and non-metropolitan schools, however, had fewer dropouts than did the central cities and did not differ from each other in the average number of dropouts (Table 12-12). Again, the effects of the interaction between the central city and social class contexts resulted in greater differences in central cities between the average number of dropouts in the higher and lower class schools than was true for the metropolitan ring or non-metropolitan schools.

The analysis of traditional positive termination, as measured by the percent of high school graduates going directly on to a four-year college, indicated that, as expected, the average percent of pupils going on to a four-year college from higher class schools was significantly greater than that from lower class schools (Table 12-13). Again, the interaction of central city and social class contexts resulted in a greater difference in the central city between higher and lower class schools than in the metropolitan ring or non-metropolitan area schools (Table 12-15). Further, interaction of the effects of the ring and social class environments resulted in average positive termination percentages in lower class schools being greater in the non-metropolitan area schools than in the metropolitan ring, while the average positive termination differences for higher class schools between metropolitan ring and non-metropolitan area was as expected. Thus, in higher social class settings public schools in the metropolitan ring are more effective, on the average, than schools in the non-metropolitan area, but this is not true in lower social class settings (Tables 12-13 and 12-15).

A second reversal from the expected results occurred with respect to regional effects. On the average, public schools in the less modern regions had a significantly greater percent of their high school graduates going on to a four-year college than did schools in the more modern region. This appears to be particularly true in the non-metropolitan areas (Table 12-13).

However, the analysis of the composite measure of positive termination, as measured by the percent of high school graduates going on to any type of further education (corrected for dropouts), revealed that the more modern region and social class environments, on the average, sent a greater percentage of pupils on to some form of higher education than do their less modern counterparts (Table 12-16). The effects of metropolitanization proved to be more complex, however. Both regional and social class interactions with the metropolitan area were significant (Table 12-18). Specifically, it is only in the less modern region that the central city, on the average, is more effective than the ring--and this is true only for schools in the higher social class environments. The reverse is true for the lower class environments in the same region (Table 12-16). Specifically, on the average, a smaller percentage of pupils go on to further education from the central city lower class schools than from the metropolitan ring lower class schools, and this is less than the proportion of pupils seeking further education in the non-metropolitan lower class schools. In the more modern area, the effects differ. The metropolitan ring higher social class schools are the most effective, on the average, followed by the central city and then by the non-metropolitan area schools (Table 12-16). Lower social class schools, on the other hand, do not differ between the metropolitan ring and non-metropolitan area environments, but both sets of schools, on the average, are more effective than lower class schools in the central city (Table 12-18). In sum, with respect to higher social class, schools in the metropolitan ring of the less modern region are less effective than expected while those in the metropolitan central city in lower social class environments of both the more and less modern regions are less effective than expected (Tables 12-16 and 12-18).

Conclusion. It can be noted from the overall results reported in Chapters Ten, Eleven and Twelve that the working hypothesis advanced in Chapter Eight (that the more modern the sociocultural context of the American public school, the more modern its organizational structure and functioning) was generally supported. This conclusion is particularly evident in the summarization presented in Table 14-1. There it can be seen that, with the exception of the social class context at the junior high and elementary levels, the structural variables of size and specialization varied systematically as predicted by our working hypothesis. In both cases the exception appears to be a result of the interaction of the effects of social class with the effects of the metropolitan areas as well as of the fact that the range of size for those schools is more limited. The input variables of teacher professional training and sex distribution within the school behaved differently within each level of the school. In 9 out of 12 instances, with respect to professional training, the coefficients were significant as predicted, that is, the more modern the context, the higher the percent of teachers in the school with at least a master's degree. The exceptions, at the elementary and junior high level, were in the central city and appear to be attributable to the interaction effects of central city metropolitan area with region. However, the sex distribution of teachers was as predicted only with respect to regional differences in modernization. Other input variables, relevant only to the elementary and junior high school levels, were as expected for 9 out of 12 coefficients tested.

At the senior high and elmentary school levels, throughput variables of technical knowledge, technical skill and an instrumental orientation behaved in the anticipated manner under the effects of regional and social class contexts in all instances but one. However, at the junior high level, only social class environmental effects were consistent with our expectations. Further, in only one instance did metropolitan effects support our working hypothesis. It seems apparent in the latter case that the interaction of the social class and metropolitan contexts upon the school was responsible for the negative results obtained.

Output variables behaved in the manner anticipated for both region and social class, except in the instance of the percent of students who went on to a four-year college (traditional positive termination). However, as in the case of organizational throughput, metropolitan area results were not as anticipated from our working hypothesis. And again the interaction of social class effects with metropolitan area effects contributed to the lack of positive results.

Overall, structural variables were most susceptible to the effects of modernization, followed by input variables and output variables. Throughput variables were least supportive of the working hypothesis. Table 14-2 summarizes these results in the form of ratios.

Table 14-1. Summary of Statistically Significant Sociocultural Context Coefficients, by Type of Organizational Variable and Type of Public School.

Type of Organizational Variable and Type of Public School	Sociocultural Context Variable[a]								
	Main Effects[b]				Interaction Effects[c]				
	R_1	M_1	M_2	S_1	R_1M_1	R_1M_2	R_1S_1	M_1S_1	M_2S_1
Schools with a 12th Grade									
a) Organizational Structure									
Degree of Specialization (Table 10-8)	+	+	+	+			*	*	*
Senior High Schools									
a) Organizational Structure									
Size (Table 10-5)	+	+	+	+	*	*			
b) Organizational Inputs									
Professional Training (Table 11-2)	+	+	+	+					
Sex Distribution (Table 11-5)	+		-						
c) Production Throughput/ Production Output									
Technical Knowledge (Table 12-2)	+		-	+					*

Table 14-1. Continued

Type of Organizational Variable and Type of Public School	Sociocultural Context Variable[a]								
	Main Effects[b]				Interaction Effects[c]				
	R_1	M_1	M_2	S_1	R_1M_1	R_1M_2	R_1S_1	M_1S_1	M_2S_1
Technical Skill (Table 12-5)			-	+					
Instrumental Orientation (Table 12-8)	+		-	+					*
Negative Termination (Table 12-11)	+		-	+					*
Positive Termination (Table 12-14)	-			+				*	*
Summary Output (Table 12-17)	+	+		+	*			*	*
Junior High Schools									
a) Organizational Structure									
Size (Table 10-5)	+	+	+			*			*
b) Organizational Input									
Professional Training (Table 11-2)	+		+	+	*	*			
Sex Distribution (Table 11-5)	+		-	-		*			*

Table 14-1. Continued.

Type of Organizational Variable and Type of Public School	Sociocultural Context Variable[a]								
	Main Effects[b]				Interaction Effects[c]				
	R_1	M_1	M_2	S_1	R_1M_1	R_1M_2	R_1S_1	M_1S_1	M_2S_1
Typing Emphasis (Table 11-11)	+		+						
Mechanical Skill Emphasis (Table 11-14)	+	+	+	+	*		*	*	*
c) Production Throughput									
Technical Knowledge (Table 12-2)			-	+					*
Technical Skill (Table 12-5)		+	-	+					*
Instrumental Orientation (Table 12-8)			-	+					*
Elementary Schools									
a) Organizational Structure									
Size (Table 10-5)	+	+	+			*			*
b) Organizational Input									
Professional Training (Table 11-2)			+	+	*				
Sex Distribution (Table 11-5)	+		-	-	*	*			
Library Emphasis (Table 11-8)	-	+	+	+					

Table 14-1. Continued.

Type of Organizational Variable and Type of Public School	Sociocultural Context Variable[a]								
	Main Effects[b]				Interaction Effects[c]				
	R_1	M_1	M_2	S_1	R_1M_1	R_1M_2	R_1S_1	M_1S_1	M_2S_1
c) Production Throughput									
Technical Knowledge	+		-	+					*
Technical Skill	+		-	+			*	*	*
Instrumental Orientation	+		-	+					*
Summary of All Tests									
Total Significant as Predicted	18	9	10	19	-	-	-	-	-
Total Significant Not as Predicted	2	0	13	2	-	-	-	-	-
Total Significant Either Direction	20	9	23	21	6	6	3	5	16
Total Number of Coefficients Tested	25	25	25	25	25	25	25	25	25

[a] See Table 10-4 for operational definitions of the sociocultural context variables.

[b] For the main effects those coefficients which are statistically significant (one-tailed) in the predicted direction are coded "+," and those which are statistically significant (two-tailed) in a direction opposite from that which was predicted are coded "-."

[c] For the interaction effects those coefficients which are statistically significant (two-tailed) in either direction are coded "*."

Table 14-2. Ratio of Statistically Significant Sociocultural Context Coefficients to all Coefficients Tested, by Type of Organizational Variable and Type of Public School.

Type of Organizational Variable and Type of Public School	Sociocultural Context Variable[a]								
	Main Effects[b]				Interaction Effects[c]				
	R_1	M_1	M_2	S_1	R_1M_1	R_1M_2	R_1S_1	M_1S_1	M_2S_1
Organizational Structure									
Schools with a 12th Grade	1/1	1/1	1/1	1/1	0/1	0/1	1/1	1/1	1/1
Senior High Schools	1/1	1/1	1/1	1/1	1/1	1/1	0/1	0/1	0/1
Junior High Schools	1/1	1/1	1/1	0/1	0/1	1/1	0/1	0/1	1/1
Elementary Schools	1/1	1/1	1/1	0/1	0/1	1/1	0/1	0/1	1/1
All Types	4/4	4/4	4/4	2/4	1/4	3/4	1/4	1/4	3/4
Organizational Input									
Senior High Schools	2/2	1/2	1/2	1/2	0/2	0/2	0/2	0/2	0/2
Junior High Schools	4/4	1/4	3/4	2/4	2/4	2/4	1/4	1/4	2/4
Elementary Schools	1/3	1/3	2/3	2/3	2/3	1/3	0/3	0/3	0/3
All Types	7/9	3/9	6/9	5/9	4/9	3/9	1/9	1/9	2/9

Table 14-2. Continued

Type of Organizational Variable and Type of Public School	Sociocultural Context Variable[a]								
	Main Effects[b]				Interaction Effects[c]				
	R_1	M_1	M_2	S_1	R_1M_1	R_1M_2	R_1S_1	M_1S_1	M_2S_1
Production Throughput and Output									
Senior High Schools	4/6	1/6	0/6	6/6	1/6	0/6	0/6	2/6	5/6
Junior High Schools	0/3	1/3	0/3	3/3	0/3	0/3	0/3	0/3	3/3
Elementary Schools	3/3	0/3	0/3	3/3	0/3	0/3	1/3	1/3	3/3
All Types	7/12	2/12	0/12	12/12	1/12	0/12	1/12	3/12	11/12
All Organizational Variables	18/25	9/25	10/25	19/25	6/25	6/25	3/25	5/25	16/25

[a] See Table 10-4 for operational definitions of the sociocultural context variables.

[b] For the main effects only those coefficients which are statistically significant in the predicted direction have been included in the numerator.

[c] For the interaction effects all statistically significant coefficients have been included in the numerator.

From the perspective of the effects of the three modernization contexts upon the school, it is apparent from Table 14-2 that social class and regional context effects are most consistent with the working hypothesis. Metropolitanization effects were less so. Further, it is also apparent that the central city-social class interaction (significant for 16 of 25 coefficients tested) is particularly important in terms of its effects upon the structure and functioning of schools.

Beyond the general support for the working hypothesis summarized in Tables 14-1 and 14-2, it should also be observed that in the case of organizational inputs, relationships were examined both before and after the possible extraneous effect of organizational size was controlled for. So, also, when throughputs and outputs were analyzed, organizational size and the professional training of the teaching force were controlled for. In only a very few instances, usually associated with the effects of metropolitan area, did controlling for these possible "intervening" variables influence the results reported above.

Implications

The problem to which this study has been directed is the issue of equality of educational opportunity within American society. In the preceding analysis, we have reported the results obtained when the effects of the environment upon the school as an open social organization were considered. In this final section of our report, we shall relate these findings to the focus of the study. Beyond this, however, we shall consider the implication of these results for the nature of education in American society and suggest their relevance for future research efforts. Although longitudinal data will eventually be required to verify relationships we have postulated as existing between modernization and formal education in American society, the model which we advanced on an a priori basis has received sufficient support from existing data to warrant further, more detailed research. If environmental influences upon the school are as anticipated in our earlier discussions and as suggested by our subsequent analyses, then a great deal of insight can be gained into the social dynamics of education in a modern industrial society through an extension of the knowledge gained in this report. Therefore, before turning to the specific implications of our findings for the issue of equality of educational opportunity, it may be useful to consider the more general implications of our results for the American educational system.

General. It will be remembered that in Chapter Eight regional differences in education between the less modern and the more modern regions were predicted due to the difference in the emphasis placed upon values in the two regions. The results reported in Chapters Ten, Eleven, and Twelve, while only indirectly supportive of that difference, were generally consistent with expectations generated by educational differences noted in Chapter Five in the dominant values associated with the two regions. In fact, two of the seven "exceptions" to our expectations (percent of graduating seniors who go on to four-year colleges, and the percent of elementary schools with a centralized library) could, in retrospect, be construed as support, for such measures probably tap the more traditional (as opposed to modern) view of education held to be dominant in the less modern region. Be that as it may, however, the overall results were consistent enough with our expectations to suggest the importance of the impact of social values on the school as a social organization. Such a relationship, if supported by further research, can confirm a reliance by the school upon its environmental context beyond that usually attributed to economic or ecological factors. Said somewhat differently, the sociocultural environment exerts influence upon the school beyond that usually ascribed to the wealth of the immediate community, its rural or urban location, the size of the school, and the like. Values regarding the purpose of education seem to be related to the sociocultural orientation of the region and appear to affect the school's structure and functioning in such a way as to influence its student output.

The importance of such a macroscopic social context as region is rarely considered by educators, reformers, or interested laymen in more than a purely demographic fashion. Yet its effect upon educational development could well be more important than that of any other single system. Much like the case of agricultural and engineering specialists in underdeveloped nations who find their efforts to introduce technological innovations blocked by traditional attitudes and values regarding existing practices, many of the unsuccessful efforts of educational innovators to bring about change in schools in the less modern regions of America can probably be attributed as much, if not more, to traditional values than to the "limited" financial, human, or material resources generally considered as primarily responsible for underdevelopment.

There is, of course, an important underlying assumption regarding such regional differences which should be made explicit. This is that both more and less modern regions may be considered as moving along a continuum of increasing modernization in terms of both technology and values. Thus, the less modern region is moving toward a value orientation similar to that now held in the more modern region. However, at the same time values in the more modern region are also becoming "more modern." If one accepts the validity of this assumption, then the dynamic quality of this sociocultural effect upon the school suggests that education, like other major social institutions, will face a period of increasing social conflict between the growing needs of a modern society and the apparently more slowly changing values of traditional local environments. While neither our data, nor other existing research will allow us to predict the exact nature of such conflict, it seems safe to assume the ultimate result will be a highly centralized system of public education in America which is heavily insulated from local constraints and thus more sensitive to the needs of the larger society. This assumption, of course, is not based upon any feeling for the inevitability of such a change process, but rather upon its high probability given current conditions. On the basis of both historical and cross-cultural evidence previously noted in Chapter Two, as well as upon theoretical grounds,[1] there is every reason to expect such a development to transpire.

In Chapter Six we noted differences in the nature of community solidarity in metropolitan and non-metropolitan areas as being of importance in its effect upon the school. We also noted several times that various students of these differences held that they are becoming less important. In Chapter Seven, the increasing importance of social class as a basis for determining the nature of social relationships was also noted. Our results suggest that we gave insufficient attention to both the interactive effects of these two occurances and to the extent to which these changes have already been reflected in the structure and functioning of formal education. While metropolitan/non-metropolitan differences still exist, particularly with regard to school structure, our data suggest that social class differences currently are particularly important as an environmental influence upon the throughput and output of the school and will become increasingly so.

If the above interpretation is correct, it suggests that the school's role as a community agent will become increasingly defined as a vocational means to a societal end rather than a source of community cohesion. Such a change is consistent with the nature of modernization, as we have previously discussed it, for as a society becomes more complex technically, its dependence upon the formal educational system can be expected to increase. Since social class, as we have defined it, is closely related to the occupational structure of the technical order, it is reasonable to anticipate the growing importance of social class context as an environmental influence upon education.

What is suggested by this relationship is that it will be increasingly difficult for the public school as it is currently constituted to successfully transmit an instrumental orientation to its student population coming from lower social class backgrounds. As social class distinctions become more important in the environment, less support from lower class environment for the institutional role of the school can be expected. The feasibility of this suggestion is indirectly supported by the evidence previously cited in Chapters Eleven and Twelve on the ineffective outputs from lower class schools in the central city. As we shall subsequently suggest in our discussion of implications for the equality of educational opportunity, it may prove to be more effective _from the organization's standpoint_ to "wash out" most lower class pupils. The desirability of such an outcome from the society's standpoint is obviously a different matter.

Our findings also lend support to the frequently voiced assumption that schools are getting bigger and more specialized as society is becoming increasingly modern. Seen from the perspective of our theoretical framework, this developmental change is both necessary and consistent with the requirements of modern society. Specialized training and a particular orientation toward social behavior are requisites in the successful adaptation of the individual to the complexities of modern life. Education, it would seem, plays a much more critical role in this respect than is frequently realized, in spite of the cognizance given to increased size and specialization. For, if our reasoning is correct, it is not simply the size of the school nor its complexity _per se_ which are important. It is, rather, the consequent behavior required in these types of organizations for teachers and administrators, as well as for pupils, that provides the type of socialization currently necessary for adult life. In effect, the school becomes a microcosm of the larger society with its specialized skills and instrumental approach to life. Thus the school promotes, to use Aron's term, "the scientific and technical rationalization" of life required for modern industrial society.[2]

A negative by-product of this development, however, appears to be its effect upon students from lower social class contexts in central cities. Many of the current problems of education for lower class children in central cities may be attributable to the fact that lower class immigrants from the less modern sociocultural contexts of the United States (which typically have small schools and relatively particularistic organization-student relationships) are suddenly required to attend large schools (having more universalistic organization-student relationships). Our reasoning would lead us to expect that for students from traditional environments, large central city schools, rather than being functional for student socialization, are dysfunctional. Perhaps what is currently required in lower class areas of central cities are "half-way schools" which are smaller and more particularistic than those which are typically found in such areas. Such schools could provide a transition from the types of organization-student relationships generally functional in less modern contexts to those which are functional in the more modern contexts of contemporary America in which many lower class migrants live.

If the above reasoning with respect to the organizational size of schools is correct, the results of our analysis have a second general implication for the school not frequently considered by professional educators in any systematic fashion. This implication has to do with an organizational basis for qualitative differences in higher education within American society. While research in higher education upon college student performance has shown that students from rural,[3] lower class,[4] and less modern region of America[5] do poorer in college than do students from metropolitan areas, the middle classes, and the more modern regions, the relationship has usually been explained in terms of differences in family background. In addition to family origin, however, our data suggest that more consideration should be given to the nature of the pre-college socialization experience in secondary schools. It is entirely possible that public school socialization experiences in the less modern areas serve to reinforce rather than overcome the negative influence of a family background in the less modern context often found to be detrimental to educational achievement in modern American society. By this we mean that beyond the problem of inadequate academic preparation, frequently associated with schools in rural, lower class or less modern regions, there is the tendency of the school as an open system to adjust its socialization practices to orientations dominant in the local environment, thereby possibly inculcating attitudes and values inconsistent with the instrumental orientation needed for success in college and in later life in a modern society. The subsequent alienation of many of these students while in college, contributing to their withdrawal from college, suggests that formal schooling in less modern contexts is often inadequate to prepare students for the type of organization-student relationship found in most large public universities. On the basis of the theory and data presented in this report, such a conclusion seems reasonable and worth exploring further.

Specific Implications. Prior to discussing the specific implications of our analysis for the issue of educational equality in contemporary America, it is desirable to explicate the relationship of school "effectiveness" to equality of educational opportunity, for several of the implications to be discussed hinge directly upon this relationship.

In Chapter One it was suggested that currently a prominent conception of equality of educational opportunity rests upon the assertion that to achieve equal educational opportunity, schools, regardless of their raw materials, must be equal in their outputs. Subsequently, in Chapter Two, organizational "effectiveness" was defined to be the extent to which the school as a social organization was successful in meeting the manpower requirements of the larger society. Clearly, under conditions of less than optimum employment, educational "equality" and organizational "effectiveness" can be in conflict. And this conflict, is, in the final analysis, at the core of the problem of equality of educational opportunity in modern societies. In an abstract way, a society has rather particular manpower requirements for its educational system and technically it matters little how these manpower requirements are achieved. On the other hand, it matters a great deal to many individual members of that society who are selected for different vocational positions. Thus, an age old problem is faced by those who seek to bring about greater equality of educational opportunity--the conflict between the needs of the individual and the requirements of the society to which he belongs.

In this instance the conflict finds particular expression in the rationality of the educational system of modern societies. Assuming that each school strives for effectiveness in terms of the requirements of the larger society, its "objective" rationality (as discussed in Chapter Three) would encourage organizational efficiency relative to the allocation of resources used. This efficiency would logically dictate a differential expenditure of resources relative to the student population (e.g., greater resources to those who have the greatest potential for contributing to the society) in order to maximize effectiveness. Such differential expenditures of organizational energies may be perfectly justified from the standpoint of the organization and the larger society, but they seldom result in equality of educational opportunity. In fact, as we will subsequently point out, just the reverse effect generally occurs. Thus, the "objective rationality" associated with modern bureaucratic organizations can operate at cross purposes with efforts to insure equality of educational opportunity.

There is, of course, a second aspect to this somewhat paradoxical dilemma associated with rationality and the school. That is the manner in which the "subjective rationality" of American society, based upon values and beliefs previously discussed in Chapter Five, influences the bureaucratic efficiency and effectiveness of the school. While such influence may have negative consequences for the effectiveness of the school (as seen from the standpoint of meeting societal needs), it is also true that it can be positive in terms of equal educational opportunity as it is currently

(5)

defined. The somewhat deterministic nature of organizational rationality in modern society, in other words, is inevitable only in so far as the organization operates as a closed system. In our theoretical discussion, however, we have argued that schools as social systems are not closed. Therefore, while the nature of education's role in modern American society suggests that schools will become increasingly oriented to societal requirements, rather than local constraints, it does not necessarily follow that there will be less equality of educational opportunity.

If effectiveness of the school neither insures an increase in equality of educational opportunity, nor precludes its development, what then is its effect? We would argue that the school's effectiveness is related to equality of educational opportunity to the extent that societal beliefs and values supportive of such equality are incorporated into the educational order. In other words, the objective rationality of the school can only be directed to the achievement of greater equality of opportunity to the extent that environmental pressures and constraints require it to be so. It is for this reason that, as schools come under the greater influence of the larger society as opposed to local environments (i.e., as the control of public education becomes more centralized), school effectiveness can become a relevant consideration for equality of educational opportunity.

Seen from the macroscopic level, it is apparent that, if one adopts the most recent interpretation of the concept of equality of educational opportunity (equal school output) and views it in terms of the percent of a graduating high school class in a school who go on to a four-year college (a widely used measure in contemporary discourse), significant and consistent differences exist in regional and metropolitan environments relative to social class effects upon the schools. In every instance, lower social class schools are sending fewer students on to four-year colleges than are higher social class schools (Table 12-13). Further, the magnitude of the difference between these two types of schools is greatest in the central city of the more modern region (20.7 percent). Two immediate implications are associated with this finding. First, if going on to a four-year college is important to the success of the society, and assuming a random distribution of the potential to benefit from college, the results would lead one to suggest that schools serving a lower class clientele are not as effective as those serving a higher social class clientele. Further, inequality exists in educational opportunity for those who attend schools located in lower social class environments for they do not have equal access to college. The second immediate implication to be derived from these particular results would be that, consistent with the total nature of the modernization process discussed in Chapter Two, the tendency toward differentiation characteristic of modern societies is accentuating differential opportunities for education between the social classes.

The first implication is, of course, difficult to appraise further, given the limitations of the data available to us. However, using a broader definition of positive termination (one which takes into account both dropouts and other types of further education, thereby off-setting to some extent the economic and psychological advantages of dealing with the most affluent student population), does not appreciably affect the mean percentage difference between higher social class schools and lower social class schools (Table 12-16). Further, if the measures of throughput are considered for the elementary and junior high schools (which generally encompasses the compulsory ages of school attendance), it is apparent that there is little indication that social class differences are appreciably ameliorated between the elementary and junior high years in reading retardation (Table 12-1), mean I.Q. (Table 12-4), or age-grade retardation (Table 12-7). These findings suggest that the lower class school is doing little to reduce inequalities in educational opportunity for it is not reducing throughput differences over time. Also, if school effectiveness is defined in the absolute terms of meeting the needs of the larger society, the schools in lower social class areas are not as effective as the schools in the higher social class areas.

Finally, an additional measure of support for the implication that lower social class schools are less effective is suggested by considering the variation in inputs between schools in higher and lower social class environments. In terms of the percent of teachers with a master's degree (Table 11-1), percent of elementary schools having a centralized library (Table 11-7), the emphasis upon typing instruction (Table 11-10), and the percent of junior high schools having a shop with power tools (Table 11-13), the schools in higher social class environments in the vast majority of regional and metropolitan area contexts exceed their lower social class counterparts. Only in the input of male teachers does this pattern fail to develop (Table 11-4). These results would suggest that schools in lower class environments (where the pre-school disadvantages of pupils are the greatest) receive less environmental support for organizing to meet societal needs in ways which, it seems reasonable to surmize, could help them to be more effective.

In sum, the results with respect to organizational input and throughput lend a measure of support to the implication suggested by significant differences in output between schools in higher and lower social class contexts that schools in lower social class contexts are less effective than are those in higher social class contexts. If, upon further investigation, these preliminary and tentative conclusions are proven to be correct, there exists a sound basis for arguing that for the lower classes inequality in educational opportunity is, indeed, attributable in some measure to the institutional nature of American education.

Reforms directed toward ameliorating this institutional characteristic may be evaluated in terms of their probability of success. Proposals focusing upon the individual, for example, directed toward compensatory education would probably have only limited success, for structural inadequacies in the educational system itself would tend to counteract successes obtained at the individual level. (By way of analogy, this type of reform may be likened to a very long foot race in which some runners are required to start appreciably behind their competition but are given some extra training. This may facilitate overcoming the original disadvantage but the odds would probably be against it.) So, also, reforms, such as school decentralization, while having the potential to modify in some respects the impact of the schools' objective rationality, would probably do little to alleviate the "bias" within the larger society which seems to insist upon a single definition of organizational effectiveness. Since education in modern society is closely tied to occupational success and is becoming increasingly identified with vocational preparation, decentralization of the control of *lower class schools* tend to enhance the local constraints upon such schools as open social systems and can lead to a greater concern with maintenance and boundary and a lessor concern for adaptation and production. Very likely this would result in output even less prepared to perform in vocational roles than is currently the case. Thus, such reform by itself could possibly lead to an effect opposite from that sought, as far as the equality of opportunity to compete in a modern society is concerned.

Reforms focusing upon the social order in contrast to those focused upon the individual or the educational system, would tend to have a greater impact upon inequality of an institutional nature. Reform proposals advocating a free market approach, for example, could offset the institutional inequality suggested by our results by bringing about a redistribution of lower class students to many middle class schools. Giving the individual more choice theoretically would result in a more random distribution of students from different social backgrounds in the various schools, but only if parents had equal access to the type of information required for a rational choice and were not being discriminated against by selection procedures. Limiting the effectiveness of this reform, however, would be the partial nature of the educational re-structuring proposed--it does little directly to change the control or administration of the school itself. The organizational rationality of the school would tend to dictate the development of criteria other than proximity of residence for the admission of students. Such criteria, consistent with the schools' institutional role, would very likely lead to an emphasis upon vocational specialization in the school not unlike the current tracking system of English education. A further limitation to the effectivness of this approach seems inherent in the reaction of higher social class parents to the potential influx of lower social class students (the reverse phenomena of higher social class students voluntarily seeking education in predominantly lower social class schools is very unlikely). Current controversy over "bussing" in metropolitan areas is indicative of the type of reactions which can be anticipated.

The second implication mentioned relative to social class is that the tendency toward differentiation, characteristic of modern societies, may be accentuating differential opportunities for education between the social classes. This is much more difficult to support given the nature of the data available to us. This implication was suggested by the fact that the greatest difference in schools in higher and lower social class contexts in the percent of pupils attending a four-year college from high school was in the central city of the most modern region (20.7 percent, Table 12-12). Using a composite measure did not reduce this difference appreciably. Of further interest in this regard is the pattern evident in Table 12-16. Within each region, the difference between the mean percent of pupils going on to any further type of education in schools located in higher and lower social class contexts is greatest in the central city, next greatest in the metropolitan ring and least in the non-metropolitan area. Following the logic of our earlier discussion on modernization, within each region differentiation is greatest in the most modern metropolitan area and least in the less modern area.

Support for this implication from other results in this analysis is limited and inconclusive, however. Thus, in the case of throughputs, increases in school means for reading retardation appear to spread the difference between schools in differing social class contexts moving from the elementary through the junior high school (Table 12-1). For example, in elementary schools in the central city of the more modern region, the mean percent of retardation for schools in the lower class context was 33.8 percent. It increased at the level of the junior high school to 44.0 percent--an increase of 10.2 percent. In contrast, the metropolitan ring elementary schools in the lower social class context was 19.4 percent, which increased 5.8 percent to 25.2 percent at the junior high level. Other differences tended to follow the same pattern on this particular input variable. On the other hand, changes in the throughput measures of the mean I.Q. of the school and changes in the percent of age-grade retardation revealed no such pattern. Other results reported in this study do not lend themselves to interpretation relative to this implication. It would seem, then, that while some evidence suggests the possibility that inequality in educational opportunity is accentuated in more modern areas, our data are insufficient to draw even tentative conclusions regarding social class differences in outputs other than post high school education. However, it must be observed that a conclusion of such differentiation is both theoretically feasible and realistically possible and should, therefore, be systematically explored in future research.

Past research on equality of educational opportunity has not given a great deal of attention to the possible effects of regional environment (beyond that associated with racial differences among students) upon school output, and yet, as discussed in Chapter Five, evidence is available to suggest that the educational experience varies significantly in different regions of the country, irrespective of racial differences. So, also, results of this analysis confirm the relationship between region and differences in education within American society. In addition, this educational difference was shown to vary systematically with the modernity of the region. Our less modern region was found to contain, on the average, smaller, less specialized schools, less specialized inputs at the senior and junior high school levels, less effective throughputs at the senior high and elementary school levels, higher rates of school dropouts and lower proportions of high school graduates seeking further education of any type (except for four-year college).

One implication of these results is that pupils who attend schools in the less modern regions of the United States have less opportunity to compete in the larger society than do pupils in the more modern regions. Given the cultural orientation ascribed to modernization in Chapter Two, such a difference in opportunity between regions does seem understandable. The "rationalization" of scientific and technical aspects of social life, to use Aron's term, requires more effective use of the formal educational system. On the other hand, it should be remembered that on the societal level, such needs do not assure a greater equality of educational opportunity. To the extent the needs of modern technology can be fulfilled without such equality, and existing values and beliefs oppose its development, we would anticipate limited development in that direction at best. The rationalization of social life generally, and organizational life specifically, in the more modern region may well place pressures upon existing social systems to emphasize achievement criteria in education which result in an increase in the number of socially disadvantaged youth who go on to further education beyond high school, but with little change in the proportion of such youth who go on to college. Thus, in the long run absolute equality of educational opportunity in the more modern contexts may be enhanced only slightly compared to that in a less modern environment (see Table 12-16 which is suggestive of this development).

Reforms advocating changes focused directly on the individual pupil seem to offer little solution to this apparent inequity, for the problem does not appear to rest so much with the individual as with the general sociocultural context in which the school is located. As noted earlier in this chapter, without incorporating the beliefs and values supportive of equality into the educational structure, it is unlikely that an increased organizational rationality associated with the modernization process will lead to greater equality of educational opportunity. Giving the individual freer choice in the selection of schools or exposing him to a more intensive educational experience may help some disadvantaged children, but it leaves open to question its utility for the majority.

On the other hand, reforms directed toward the social order and the educational system seem more promising, relative to this type of inequity, for to the extent the rationalization of the organization can be related to values and beliefs in the environment supportive of equality of opportunity, a significant reduction in "rational inequality" is likely to occur. Of course, such reform proposals as school bussing, free markets, or centralization are useful mechanisms for increasing equality of opportunity to the extent that they are accepted by environmental interests as a legitimate part of the school's institutional role.

The problem of achieving such legitimation is, perhaps, no where better illustrated than in the results obtained in our analysis of the effects of metropolitanization on the school. In that instance, as evident in Table 14-2, with the exception of structural characteristics, relatively few of the main effect coefficients were in the expected direction. On the other hand, social class and central city interaction effects were significant in 11 out of 12 instances for production throughput and output. In every instance, this interaction effect appears to result from the unfavorable position of lower social class schools relative to both higher social class schools in the central city and lower class schools in the metropolitan ring and non-metropolitan areas. This is true, furthermore, in both regions.

The well-known "flight to the suburbs" associated with social mobility and race in American society could be instrumental in explaining this anomaly. On most measures of throughput and output, particularly in the most modern region, the schools in the higher social class context of the metropolitan ring compare most favorably to schools in other social class contexts in other metropolitan or non-metropolitan areas, suggesting that educational outcomes compatible with the requirements of modern life are taking place in our cities. On the other hand, our data on structure suggests that the explanation for this apparent inconsistency may lie within the school system of the central city. Specifically, it is possible that the organizational rationality of central city schools is the basis for the relatively poor showing of schools with lower social class students. The modernity of organizational structure in the central city may be such that in terms of attempting to meet the overall requirements of the society for trained manpower, "washing out" lower class students from the central city school system (as has traditionally been done in non-metropolitan school systems) may be more "efficient" than attempting to salvage them. But in urban areas with dense population and with highly differentiated social classes it clearly has unintended consequences.

This "rational inequality" could well provide even greater impetus for the decentralization of the control of schools in lower class areas such as that in New York City where large segments of lower social class parents currently are reacting to an apparent institutional bias (which many claim is more than simply racial in nature). Thus, organizational rationality, expressed in terms of societal criteria and standards superimposed on students and parents which they do not share, may permit a basis for legal rational decision making well attuned to the school's institutional role but alien to the aspirations of its lower social class clientele. Accordingly, the press is to make the school more open as a social system at a time when the technological requirements of the society seem to require greater centralization.

This shortcoming of the decentralization "solution" is immediately apparent in the reaction of teachers and school officials who perceive it, quite accurately, as a threat to their legal (and rational) authority within the school. Operating within an institutional framework that defines effectiveness in terms of societal requirements rather than in terms of the needs of the individual, they argue for the maintenance of the existing organizational rationality. Whether this is right or wrong, in terms of a moral judgment, depends upon the ideological perspective of those making such a judgment. From a sociological perspective, however, the conflict centers around a dispute regarding whether the solution is to change the lower class environment or to change the organizational rationality of the school.

The first alternative is problematic as a solution for several reasons, not the least of which is the continued migration of rural southern Negroes, Puerto Ricans, and Appalachian whites to the city. Such migration appears to have the unanticipated effect of forcing the migrants into social milieus far more appropriate for the beliefs and values of their urban predecessors than for themselves. To change the local environment to a state of congruency with the rationality of the school system may, in other words, be beyond the ability of the city, state, or federal government unless migration is stopped or greatly controlled in ways which will balance the social class composition of the city. Other factors working against such an environmental change would include the economic cost of population redistribution, the resistance of the populace to such "blatant manipulation," and the shear magnitude of such an engineering task which would stretch over several decades.

The second alternative presents, of course, other problems. As previously noted, to incorporate beliefs and values legitimating equal opportunity within the inner city school would mean, in effect, a societal redefinition of organizational rationality in terms less adverse to lower social class parents and students, and more consistent with the subjective rationality of the lower class environment. In doing so, however, such a re-definition would not only be necessary for schools in lower social class environments, but it would require a similar re-definition throughout the total educational institution. Further, within the educational system, traditional forces would very likely perceive of such a change as either a dilution of educational "quality" or of educational "efficiency."

Externally, the demands of the technological system of the larger society can put limitations on the extent to which such a change in the output quality of the schools could be tolerated, given the society's current and projected manpower requirements. Similarly, the scarcity of public revenues for education can limit the introduction of apparent "inefficiencies" which, although not affecting the aggregate quality of school output, would nevertheless be allocating expensive resources to marginal raw materials. So, also, many parents from more advantaged groups would in some measure perceive such changes as a threat to the success of their own children, for there is little precedent within American society for the type of progressive taxation which would most likely be required to finance the level of educational inputs in lower class schools necessary to transform raw materials from lower class environments into outputs comparable to those which currently come only from schools in middle class environments.

Conclusions

If our interpretations of the theory and data presented in this report are accurate, what we are seeing today in the schools of our central cities are the manifestations of a conflict between the requirements of a modern society for appropriately trained manpower and the desires of many individuals for greater social justice through the equalization of educational opportunity. These two forces are in conflict because they are based upon competing priorities. To be effective in meeting the requirements of the larger society, education, as a social institution, need not be concerned with individuals, but merely with numbers. If at a particular point in time the manpower requirements are relatively stable, and if societal constraints exist in terms of the amount of energy which can be imported from the environment by the school in order to produce the required output, then it appears that education as a social institution concentrates its available energies on those raw materials which can be transformed into the desired output most efficiently (i.e., with the minimum allocation of energy). Our data suggest that these raw materials (pupils) are those which come from middle class homes in metropolitan areas.

Given the forces currently acting upon the public school in American society, it seems apparent that efforts to attain equality of educational opportunity in the schools can be achieved only to the extent that educational inputs, outputs, and functions are determined by policies and practices which perceive this end as a significant part of the school's institutional role. Whether this is best achieved by 1) re-defining the overall output requirements imposed upon American public education by the larger society (primarily the technological system), and/or 2) increasing the overall energy available to the public schools in the form of additional inputs, and/or 3) improving the process of transforming inputs into outputs, remains to be determined.

As we have suggested in Chapter One, each of these approaches currently has its advocates. Unfortunately, on the basis of past research or the limited theory and data represented in this report, we have been unable to consider in sufficient detail the efficacy of each of these alternatives or of some combination thereof. However, it is apparent from our analysis that the openness of the American public school as a social system within a highly modern (and rapidly modernizing) society currently places important constraints upon the type of reforms which can be successfully introduced. If these constraints are to be overcome, they must be far better understood than is currently the case. It is our judgment that the theoretical framework and research methods introduced in this report have particular relevance to the further understanding of these constraints and that if extended they can permit additional exploration. Given the seriousness of the contemporary crises in education in urban America, we urge that further inquiry along these lines be undertaken.

Notes and References (14)

1. Emile Durkheim, in his classical analysis on the division of labor in society, argued that the evolution of industrial society would ultimately result in an increasing interdependence of social life along occupational rather than local lines. In more contemporary times Levy has noted that, "In all of the relatively modernized contexts the levels of centralization continually rise over long periods of time." See Emile Durkheim, The Division of Labor in Society (New York: The Free Press, 1964), p. 190; and Marion J. Levy, Jr., "Social Patterns (Structures) and Problems of Modernization" in Readings on Social Change, edited by Wilbert E. Moore and Robert M. Cook (Englewood Cliffs, N. J.: Prentice-Hall, 1967), p. 197.

2. Raymond Aron, The Industrial Society: Three Essays on Ideology and Development (New York: Simon & Schuster, 1968), p. 78.

3. Dael Wolfle, America's Resources of Specialized Talent (New York: Harper and Bros., 1954).

4. Bruce K. Eckland, "Social Class and College Graduation: Some Misconceptions Corrected," American Journal of Sociology, 70 (1964), pp. 36-50.

5. Charles C. Cole, Jr., Encouraging Scientific Talent (New York: College Entrance Examination Board, 1956).

APPENDIXES

Appendix A. The Effects of Nonresponse on the School Context Study Results*

A rather common methodological problem encountered in nationwide surveys of important educational matters has been that of nonresponse to survey questionnaires. Particularly noticeable has been a reluctance on the part of many school officials to cooperate with Federal agencies in studies of possible inequality in the availability of educational services to various racial and ethnic groups. Typical of this was the resistance experienced by the 1965 survey of educational opportunity conducted by the U. S. Office of Education.[1] Approximately 30 percent of the 6,000 schools selected by probability sampling for inclusion in that survey failed to respond to the survey questionnaires or indicated in other ways an unwillingness to participate.[2]

The School Context Study presented in Chapters Nine through Twelve of this report, coming only three months after the USOE study and dealing with many of the same "sensitive" issues, was similarly constrained. Approximately 27 percent of the nationwide sample of 10,690 schools selected for study failed to return the School Questionnaire presented in Appendix B. An analysis of the geographical distribution of these nonresponding schools reveals variation by both region and residence. As reported in Table A-1 the greatest nonresponse by region (35.7 percent) occurred in the South, followed by the North Central (27.3 percent), the West (22.7 percent) and the Northeast (20.9 percent). Within all four of these Census regions nonresponse was greater within the 51 largest cities than in smaller communities (Table A-1).

Traditional Views of Nonresponse

A review of the literature on survey research and sampling techniques reveals a rather general concensus regarding the biasing effect of nonresponse such as that noted in the School Context Study.[3] While a small proportion of nonrespondents in a sample survey (generally 5 to 10 percent) is viewed as tolerable, a percentage much larger than this is generally perceived as automatically requiring the assumption of nonrandomness for the remaining (i.e., responding) portion of the desired sample.[4]

There is a body of empirical evidence often offered in support of this conclusion. For example, Hilgard and Payne, in analyzing data from a national sample of households, found that for selected characteristics those households where interviewers had difficulty in finding prospective respondents at home differed significantly from those households where prospective respondents were found at home on the first call. These differences ranged through such characteristics as residence (rural versus urban), location of employment (in versus out of the home), the age of children present in the family, the size of

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Table A-1. Percentage Distribution of Responding and Nonresponding Schools, by Community Size and Census Region.

Community Size and Region	Percent of Schools		Number of Schools
	Responding	Non-Responding	
51 Largest Cities			
Northeast	74.6%	25.4%	549
West	75.4	24.6	374
North Central	64.2	35.8	761
South	58.8	41.2	620
Other Communities			
Northeast	80.2	19.8	2196
West	77.8	22.2	1412
North Central	75.8	24.2	2114
South	65.6	34.4	2664
Region Totals			
Northeast	79.1	20.9	2745
West	77.3	22.7	1786
North Central	72.7	27.3	2875
South	64.3	35.7	3284
Grand Total	72.7	27.3	10690

the household, and the age and marital status of the respondent.[5] Yates has described an occurance in the 1946 Family Census of the United Kingdom where a 17 percent nonresponse rate was sufficient to produce serious overreporting of birthrates.[6]

In an unpublished study, Lutterman and Pavalko report marked differences in the sample characteristics of first "wave" respondents, succeeding wave respondents, and nonrespondents to a mailed questionnaire.[7] On the basis of data available from an earlier study they found that the willingness of parents to return the questionnaire was positively related to their child's measured intelligence, high school rank, educational and occupational plans, and educational and occupational attainment. Similar instances of differences between the characteristics of respondents and nonrespondents have been noted by other investigators.[8]

Such consistently reported evidence that nonrespondents differ from respondents would seem to support the argument that high nonresponse rates, particularly those thought to vary with important demographic characteristics of the target individuals, are prima facie evidence of "bias" in survey results. However, such a generalization may be unwarranted, for although nonresponse undoubtedly produces some biased results in all sample surveys, it does not necessarily follow that all results of such surveys are so biased. One must not overlook the fact that in any single survey many descriptive and analytic statistics are computed, only some of which may be affected by nonresponse In addition, many statistics are computed within subgroups of the data, rather than for the total sample. Thus comparisons which are biased on some variables may not be biased on others, and further comparisons which are biased for the total sample may not be biased for particular subgroups within that sample.

Unfortunately, there is little documentation of efforts to ascertain the extent to which respondents and nonrespondents who differ in certain characteristics can simultaneously be alike in others. Generally, this is because the essential data on which to compare respondents and nonrespondents is not available for the nonresponding group. But it also results from the fact that most investigators interested in the question of sampling bias have focused up testing a hypothesis of difference between the responding and nonresponding groups to the exclusion of one exploring their similarities.

Such possible similarities as those suggested above would seem to make untenable any unqualified assertion of bias in sample surveys due to "excessive" nonresponse rates, for when one considers the almost unlimited universe of statistical comparisons possible within most survey data, it is highly improbable that differences between respondents and nonrespondents can bias all possible comparisons. Rather than being doomed to an acknowledgement of bias, the investigator faced with a large nonresponse rate would seem to have available the possibility of demonstrating that in spite of this "excessive" nonresponse the results of the survey would not be "significantly altered" if data from the nonrespondents had also been available for inclusion in the analysis. It is this approach which was followed by the USOE in its 1965 survey.[9]

In the sections which follow it is demonstrated that the test of the working hypothesis presented in Chapters Ten through Twelve of this report is unlikely to be biased very greatly by the 27 percent nonresponse rate. Although data beyond those presented in Table A-1 are not available to compare the characteristics of responding and nonresponding _schools_ (the unit of analysis used in those chapters), a detailed comparison is possible with respect to the characteristics of a sample of _pupils_ in the responding and nonresponding schools. This could be done because the U. S. Bureau of the Census which conducted the data collection for the School Context Study had available from its October 1965 Current Population Survey data on the demographic characteristics of a sample of pupils between the ages of 6 and 13 years in both responding and nonresponding schools.[10] Although a demonstration of the fact that these two subsamples of _pupils_ do not vary greatly would constitute indirect evidence as to a lack of bias, such a result does not necessarily demonstrate that their _schools_ do not so vary. Therefore, we have also utilized the results of our analysis of pupils to compute weights and to then estimate the effects of nonresponse in our description of schools.[11]

Research Design

There are 18,373 pupils ranging in age from 6 to 13 years in the October 1965 CPS sample of the U. S. Bureau of the Census who attended a school to which a _School Questionnaire_ was mailed. Of these, 12,395 were in attendance (or had most recently attended) a school which responded to the _School Questionnaire_ and 5,987 were identified with schools which did not respond to this questionnaire.

From among the many variables available for a comparison of these two subsamples of pupils, eleven were chosen as being most highly relevant to the type of variables important to the School Context Study. These were: 1) occupation of head of household, 2) family income, 3) pupil race, 4) pupil sex, 5) pupil age, 6) region, 7) residence, 8) pupil grade placement, 9) type of school attended, 10) pupil educational aspiration, and 11) pupil liking of school.

Considering the available data, either of two approaches could have provided a statistical basis for comparing pupils in responding and nonresponding schools. One obvious approach would be to compare the mean, or some similar summarizing measure, of the pupils in the two types of schools. However, this particular approach might fail to provide information about within category variation on each variable. Not only would it result in a less discerning picture of pupils in the two types of schools, but it would fail to provide sufficient data for determining if the effects of nonresponse were selective.

A second alternative which does supply the needed information, and one that was used, is to compare pupils in the two types of schools category by category on each variable, both in the aggregate and within categories of selected context variables. Each category is thus allowed to represent a particular sample characteristic. The logic of this approach is analagous to that employed with "dummy variables" in Chapters Ten, Eleven, and Twelve. To test whether the pupils in the responding and nonresponding schools differ with respect to a particular characteristic of a particular variable, a test of the difference between the proportion of pupils in each of the two groups exhibiting that characteristic is performed.

In addition to making such comparisons on the basis of the total sample of pupils between the ages of 6 and 13, comparisons were also made within each of the four Census regions (Northeast, North Central, West, and South), within each of the three Census SMSA categories (Central City, Ring, and Nonmetropolitan), and within the twelve categories formed by the simultaneous cross-classification of these two context variables. In this way the examination of nonresponse can be carried out within subgroups of schools similar to those utilized by the School Context Study.[12]

In judging the hypothesis of no difference between pupils in the two types of schools a two-tailed test was used. Any difference between the two groups, either in the aggregate or within subgroups formed by cross-classification on other variables, significant at the .05 level will be considered as indicative of nonrandomness within that portion of the sample.

Results

Characteristics of Pupils in Responding and Nonresponding Schools. The first set of evidence relevant to an examination of the effects of nonresponse on the interpretations of the School Context Study is presented in Table A-2. There the result of a comparison of the proportion of the subsamples of pupils in the responding and nonresponding schools represented by each category of the eleven variables introduced earlier are given, both in the aggregate, by residence, by region, and by region and residence simultaneously.

In the aggregate there are significant differences between the two groups of pupils on at least one category of seven of the eleven variables (Column a). Particularly noticeable are differences within three of the four region categories, two of three residence categories, three of three race categories, three of five occupation categories, two of two income categories, two of two type of school categories, and four of five parental aspiration categories. When controls are introduced for region and for residence singly these differences persist in at least one category of each variable. What is particularly noteworthy, however, is that they do not persist within all categories of each variable.

Although providing useful information about the School Context Study sample, comparisons in the aggregate or separately by region or residence, are not as relevant to the issue at hand as are comparisons

Table A-2. Summary of Significant Differences between Pupils in Responding and Nonresponding Schools on Eleven Variables, by Residence and Region.

Variable		Residence			Region				Region and Residence											
									Northeast			West			North Central			South		
	T	CC	R	NM	NE	W	NC	S	CC	R	NM	CC	R	NM	CC	R	NM	CC	R	NM
(column)	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
Region:																				
Northeast (NE)	+	+		+	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
West (W)	+	+	+	+	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
North Central (NC)		-		+	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
South (S)	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Residence:																				
Central City (CC)	-	*	*	*			-	-	*	*	*	*	*	*	*	*	*	*	*	*
Ring (R)	+	*	*	*	-		+	+	*	*	*	*	*	*	*	*	*	*	*	*
Non Met. (NM)		*	*	*	+	+	+		*	*	*	*	*	*	*	*	*	*	*	*
Age:																				
13										+									-	
12	+				+					+										
11																				
10	-					-						-	-				-			
9																				
8																				
7							-		-							-				
6										-							+			

Key: * Difference not computable
+ Significant over-representation of pupils with this characteristic in subsample of responding schools
- Significant under-representation of pupils with this characteristic in subsample of responding schools

Table A-2. Continued

Variable			Residence			Region				Region and Residence											
										Northeast			West			North Central			South		
		T	CC	R	NM	NE	W	NC	S	CC	R	NM	CC	R	NM	CC	R	NM	CC	R	NM
	(column)	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
Sex:																					
Male																					
Female																					
Race:																					
Other		+			+																+
Negro		-	-	-	-	-		-	-	-	-					-					-
White		+	+		+	+		+	+	+	+					+					+
Occ. of Household Head:																					
No match				-										-							
Unemp/NILF		-		-	-			-			-	-			+		-				
Farm		-			-		-	+	-		+	+			-						-
Man/Ser						+		-				+		-	+		-				
White Collar		+			+			+						+			+				+
Family Income:																					
Less than $6000		-			-				-								-				-
$6000 and above		+			+				+								+				+
Type of School:																					
Public		-	-	-	-		+	-	-		-				+	-	-	-	-	-	
Private		+	+	+	+		-	+	+		+				-	+	+	+	+	+	

Key: * Difference not computable
+ Significant over-representation of pupils with this characteristic in subsample of responding schools
- Significant under-representation of pupils with this characteristic in subsample of responding schools

Table A-2. Continued

Variable			Residence			Region				Region and Residence											
										Northeast			West			North Central			South		
		T	CC	R	NM	NE	W	NC	S	CC	R	NM	CC	R	NM	CC	R	NM	CC	R	NM
	(column)	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
Grade level:																					
High School											+										
Elementary									+			+							+		
Liking of School:																					
None of the time				-							-										
Some of the time														+			-				
Most of the time																					
All of the time														-							
Parental Aspirations:																					
Grade School or more		-	-		-			-	-							-	-				-
Some high school		-		-	-				-											-	-
Finish high school		-			-			-													
Some college													-								
Finish college		+			+			+										+			+

Key: * Difference not computable
+ Significant over-representation of pupils with this characteristic in subsample of responding schools
- Significant under-representation of pupils with this characteristic in subsample of responding schools

under simultaneous controls for both region and residence, for this is how the data were analyzed in Chapters Ten through Twelve of this report. These results are also available in Table A-2, and there it can be seen that many of the significant differences which were apparent in the aggregate and by region and residence alone do not persist when region and residence are introduced simultaneously. Particularly noteworthy are differences with respect to the proportion of pupils in the two subsamples who are Negro. Although Negroes are under-represented in the aggregate, in all three residence areas, and in three of the four regions. When simultaneous controls are applied, this under-representation persists only in the central city and ring of the North-each, the central city of the North Central, and in the non-metropolitan areas of the South. Therefore, it is in these particular locations where selective nonresponse is most likely to have had a biasing effect upon the racial estimates available from the School Context Study data. In a similar fashion, although in the aggregate, by region and by residence, public schools are under-represented in the School Context Study data, this nonrandomness seems primarily confined to the central city and ring areas of the regions of North Central and South.

The results with respect to race and type of school attended are interesting but since these variables were not used in Chapters Ten through Twelve of this report they are not as crucial as is the occupation of the head of household, for it will be remembered that along with region and residence this social class variable constituted the third socio-cultural context variable of the School Context Study.

The results of our nonresponse analysis are not nearly as discouraging with respect to occupation as one might initially expect from the representation noted above for race and type of school. Although the proportion of pupils from white-collar homes in the responding and nonresponding schools differs significantly in the aggregate (column a), within residence areas this difference exists only in the non-metropolitan areas (column d), and within regions only in the North Central area (column g). When region and residence are controlled simultaneously the over-representation of pupils from white-collar families is found only in the ring of the West and North Central regions (columns m & p) and in the non-metropolitan areas of the South (column t). Such over-representation in only three of the twelve region-residence categories would seem to suggest that the effects on the distribution of occupation due to nonresponse noted in the aggregate are not likely to be as pervasive as might have been suspected originally. Similar conclusions can be drawn with respect to each of the other variables for which significant differences were found in the aggregate and are reported in column a of Table A-2.

Estimated Differences between Obtained and Target School Samples. Because the data on school structure, input, throughput, and output required to compare responding and nonresponding schools are unavailable for the nonresponding schools, it is not possible to make a direct analysis of the effects of nonresponse on the results presented in Chapters Ten, Eleven and Twelve of this report. However, given the results presented above (Table A-2) and the data upon which these results are based, it is possible to make some estimates of the effects of nonresponse on the description of the School Context Study schools presented in Chapter Nine.

Table A-3 presents estimates of the percentage of American schools in each of four region and three residence categories before and after the application of corrections based upon the date underlying Table A-2. There it can be noted that corrections for nonresponse have very little effect upon the region or residence distributions of schools which can be estimated from the School Context Study data.

In addition to these gross estimates of the proportion of schools located in each region and residence category, additional estimates were made for the proportion of schools in each residence and region category which are 1) under private control, 2) racially integrated (1-99 percent Negro), and 3) high in social class (25 to 100 percent white-collar families), variables introduced and discussed in Chapter Nine. Each of these results is presented in Table A-4. There it can be noted that although a correction for nonresponse makes little difference in the case of the percent of schools estimated to be under private control, it makes some difference in the estimates of those which are integrated or of high social class. However, it is important to note that although the absolute value of the uncorrected and corrected percentages do vary by as much as 17 percentage points, in comparing regions or residence areas _the relative values hold without exception_. When a comparison is made involving a simultaneous control for region and residence a similar consistency is observed (Table A-5).

Summary and Implications

This appendix has considered the possible effects of nonresponse to the _School Questionnaire_ of the School Context Study on the interpretations made in Chapters Nine through Twelve of this report. After introducing the general problem and considering some traditional views of the effects of nonresponse, the argument was made that the existence of "excessive" nonresponse can not be taken as _prima facie_ evidence of bias in all statistical tests made within such truncated data.

To demonstrate this within the School Context Study data a comparison was made of the sample of pupils in the schools which responded to the _School Questionnaire_ with one from the schools which did not. Although significant differences in the aggregate between the two groups were observed on seven of eleven variables, these differences seldom persisted when controls for region, residence, and region by residence were introduced. However, particularly noteworthy were some controlled differences with respect to the type of school attended by the pupil, his race, and the occupation of the head of the household in which he lived.

In order to explore the possible effects of such statistically significant "bias" upon the results presented in this report, estimates of the percentage of American schools which are in the four

Table A-3. Percentage Distribution of American Schools (as Estimated from School Context Study Sample) Before and After Correction for Nonresponse, by Region and by Residence.

	Percent of Schools (N = 7771)	
	Uncorrected	Corrected*
Region		
Northeast	28%	26%
West	18	17
North Central	28	28
South	26	29
Residence		
Central City	30%	30%
Ring	40	38
Non-metropolitan	30	32

---

*Corrected using weights derived from the analysis underlying Table A-2.

Table A-4. Percent of Private, Integrated, and High Social Class American Schools (as Estimated from the School Context Study Sample) Before and After Correction for Nonresponse, by Region and by Residence.

	Region				Residence		
	N	W	NC	S	CC	R	NM
Private Schools							
Uncorrected	25%	12%	23%	11%	26%	19%	9%
Corrected*	25	12	20	9	24	18	8
Integrated Schools							
Uncorrected	64	63	43	60	68	49	44
Corrected*	52	49	35	43	58	38	36
High Social Class Schools							
Uncorrected	72	73	62	58	65	77	50
Corrected*	64	65	53	47	55	68	41

*Corrected using weights derived from the analysis underlying Table A-2.

Table A-5. Percent of Private, Integrated, and High Social Class American Schools (as Estimated from the School Context Study Sample) Before and After Correction for Nonresponse, by Region and Residence.

	Region and Residence											
	Northeast			West			North Central			South		
	CC	R	NM	CC	R	NM	CC	R	NM	CC	R	NM
Private Schools												
Uncorrected	34%	23%	15%	16%	11%	4%	31%	23%	13%	17%	15%	4%
Corrected*	35	22	14	16	11	7	26	21	11	14	12	5
Integrated Schools												
Uncorrected	81	58	48	77	53	53	62	35	33	51	49	49
Corrected*	69	45	38	64	41	41	53	27	24	46	38	43
High Social Class Schools												
Uncorrected	65	80	64	75	77	61	60	76	46	65	73	43
Corrected*	57	72	57	67	68	55	49	66	40	52	66	32

*Corrected using weights derived from the analysis underlying Table A-2.

region and three residence categories were made, both before and after the introduction of corrections for nonresponse. Such corrections seemed to have very little effect. In addition, the percentage of schools classified as 1) private, 2) integrated, and 3) of high social class within each of the region and residence categories were made, both before and after corrections for nonresponse. Here some changes in absolute frequencies due to the correction factor were noted, but they failed to disturb the basic relationship between each of these three variables and the independent variables of region and residence.

Based upon the reasoning and analyses presented in this appendix it would seem unnecessary to disparage the results presented in Chapters Nine through Twelve of this report on the grounds of "bias" due to nonresponse. Although nonresponse to the School Questionnaire was clearly not random (exhibiting, for example, an under-representation of public schools and those which were high in percent Negro and percent blue collar), such under-representation does not appear to have affected the validity of the relationships reported between the sociocultural contexts of schools and their structure and functioning.

However, due to selective nonresponse, the sample of responding schools does under-represent those low social class schools in nonmetropolitan areas of the South which in Chapter Nine have been identified as being in sociocultural contexts lowest in degree of modernization, thus truncating this end of the modernization variable. We suspect that had the full distribution of schools been available to us for analysis more, rather than fewer, of the relationships reported in Chapters Ten through Twelve would have been judged to be statistically significant. Thus, if nonresponse has distorted our statistical inferences, it has most likely done so in a conservative manner. Rather than introducing "bias" (in the traditional sense of this term) such distortion as noted above appears to have introduced a lack of sensitivity. The effects of the sociocultural context on the structure and functioning of schools are very likely to be stronger than that which we have been able to conclude from the analyses presented in Chapters Ten, Eleven, and Twelve of this report.

Notes and References

1. James S. Coleman, et al., Equality of Educational Opportunity, Vol. 1 (Washington, D. C.: U. S. Government Printing Office, 1966).

2. Ibid., pp. 8, 565-68.

3. See, for example, Leslie Kish, Survey Sampling (New York: John Wiley and Sons, Inc., 1965), pp. 532-537, 558; William E. Denning, Some Theory of Sampling (New York: John Wiley and Sons, Inc., 1950), pp. 9-18, 33-36; William G. Cochran, Sampling Techniques (New York: John Wiley and Sons, Inc., 1953), pp. 292-299; Frank Yates, Sampling Methods for Censuses and Surveys (New York: Hafner Publishing Co., 1953), p. 130; Walter A. Hendricks, A Mathematical Theory of Sampling

(New Brunswick, N. J.: The Scarecrow Press, 1956), pp. 339-356; Nathan Goldfarb, *Longitudenal Analysis* (Chicago: The Free Press of Glencoe, 1960), pp. 55-56, 142; William E. Denning, "On Errors in Surveys," *American Sociological Review*, 9 (1944), pp. 359-369; Z. W. Birnbaum and Monroe Sirken, "On the Total Error Due to Non-Interview and Random Sampling," *International Journal of Opinion and Attitude Research*, 4 (1950/51), pp. 179-191.

4. See Denning, *Some Theory of Sampling*, *op*. *cit*., pp. 13-14; Denning, "On Errors in Surveys," *op*. *cit*., p. 364; and Kish, *op*. *cit*., p. 558.

5. Ernest R. Hilgard and Stanley L. Payne, "Those Not at Home: Riddle for Pollsters," *Public Opinion Quarterly*, 8 (1944), pp. 254-261.

6. Yates, *op*. *cit*., pp. 130-131.

7. Kenneth G. Lutterman and Ronald M. Pavalko, "Characteristics of Willing and Reluctant Respondents: Contingency Table versus Multivariate Analysis," (Paper presented at the 60th annual meeting of the American Sociological Association, 1965).

8. Hazel Gaudet and E. C. Wilson, "Who Escapes the Personal Investigator," *Journal of Applied Psychology*, 24 (1940), pp. 773-777; John A. Clausen and Robert N. Ford, "Controlling for Bias in Mail Questionnaires," *Journal of the American Statistical Association*, 42 (1947), pp. 497-511; M. Rollins, "The Practical Use of Repeated Questionnaire Waves," *Journal of Applied Psychology*, 24 (1940), pp. 770-772; Lee N. Robbins, "The Reluctant Respondent," Public Opinion Quarterly, 27 (1963), pp. 276-286; E. A. Suchman and B. McCandles, "Who Answers Questionnaires," *Journal of Applied Psychology*, 24 (1940), pp. 758-769; Alfred Politz and W. Simmons, "An Attempt to Get the 'Not-at-Homes' Into the Sample Without Callbacks," *Journal of the American Statistical Association*, 44 (1949), pp. 9-31 (See also the follow-up comments by Politz and Simmons "Note on An Attempt to Get Not-at-Homes Into the Sample Without Call-backs," *Journal of the American Statistical Association*, 45 (1950), pp. 136-137); Jeanne E. Gallahorn and J. T. Gallahorn, "An Investigation of the Effects of Three Factors on Response to Mail Questionnaires," *Public Opinion Quarterly*, 27 (1963), pp. 294-296; and Stanley C. Plog, "Explanations for a High Return Rate on a Mail Questionnaire," *Public Opinion Quarterly*, 27 (1963), pp. 297-302.

9. Coleman, *op*. *cit*., p. 8.

10. Unfortunately, data for pupils and former pupils between the ages of 14 and 19 in the nonresponding schools was unavailable and thus they could not be included in the comparisons. However, rough comparisons of individuals in this age range with those younger suggests that any distortion due to their absence is likely to be slight.

11. Since we are dealing with a representative sample of pupils from schools which failed to respond, we would expect the contextual variation among these schools to be directly reflected in the relative

occurrence of specific characteristics across the sample of schools. [To illustrate this point we might momentarily employ a hypothetical situation using one of the variables in the SCS study. Suppose, for example, more nonrespondent schools from central cities were under private than public control, we would then expect to find a greater proportion of pupils in our sample from schools of the former type than the latter. Inverting the logic of this example, as is necessitated by the nature of our data and extrapolating from pupils to schools, the occurrence of a larger proportion of pupils from private schools should indicate a similar distribution of this type of organizational context among nonresponding schools. Later in this appendix, we extend this concept of relative comparability to arrive at the "corrected" values reported in Tables A-3, A-4 and A-5. There we use the proportions associated with the prevalence of selected pupil characteristics to distribute nonresponding schools into appropriate contextual categories. Unquestionably, the assumption of a numerical comparability in the distribution of characteristics for the two groups is a very weak link in our methodology. However, the tenability of the procedure is bolstered considerably by the rather larger number of pupils in the sample].

12. Due to coding differences it was not possible to identify within the available data the nine Census divisions which were collapsed into five regions by the School Context Study. Therefore, the regional categorization of that study and of this analysis are not identical. However, the definition of Northeast and West are identical between the two approaches and those of the other regions vary only slightly.

Appendix B. The School Questionnaire

The data reported and analyzed in Chapters Nine through Twelve of this report were collected by means of the School Questionnaire presented below. This questionnaire was mailed by the U. S. Bureau of the Census to a national sample of approximately 10,500 public and private schools in January 1966 as a minor part of the Equality of Educational Opportunity survey being directed by the U. S. Office of Education. The questions were asked in order to describe the characteristics of schools being attended (or last attended in the case of nonenrollees) by the approximately 28,000 persons age six to nineteen in the October 1965 sample of households selected by the Census Bureau for its Current Population Survey (CPS).

Built into the design of the School Questionnaire was the expectation that the school principals to whom the questionnaire was being sent would vary in their willingness and ability to supply exact answers to many sensitive questions (e.g., the percent of their pupils who are Negro, since state law in many areas prohibits the identification of school pupils by race). Therefore, in order to obtain data from as many schools as possible on such sensitive questions the principals were encouraged to make estimates and to indicate the degree of accuracy associated with their estimates. The objective in having the principals indicate the accuracy of these estimates was two-fold. In cases where the principal simply did not have accurate information he could give his best estimate and be assured that the Bureau of the Census understood the nature of his reply. In cases where he could provide very accurate estimates but preferred to remain vague, he could round off his replies and report them as "rough estimates."

By means of a specially designed analysis of the data from the School Questionnaire it was apparent that the accuracy of the principals' replies varied both by question and by principal. In general the principals indicated that their replies to questions which we considered to be both objective and nonsensitive (e.g., number of full time teachers) were reported by the principals to be "very accurate." However, their answers to questions which we considered to be objective but sensitive (e.g., the percent of their pupils who are Negro) were often reported as being "rough estimates" when the precision with which the answer was given (e.g., "7" percent as opposed to "5" or "10" percent) suggested that the answer was more accurate than the principal was prepared to acknowledge. Thus it appeared that the "safety valve" feature of asking for the accuracy of the response was working as we had hoped.

As a result of an elaborate analysis of the relationship between answers reported to be of different degrees of accuracy, we concluded that for the variables reported in Chapters Nine through Twelve of this report our conclusions regarding the working hypothesis of this research was unaffected by the accuracy which the principal attached to his report. Therefore, in order to build up our sample size to a level permitting simultaneous cross-classification on the three sociocultural context variables we pooled all reports regardless of their accuracy codes.

Further justification for this procedure can be seen in Appendix D. There we report that in the aggregate, and by region and residence area, the principals' estimates of the percent of all pupils in their schools who are Negro (Item 5i) and the percent of all pupils whose father is a white-collar worker (Item 5p) are each closely associated with estimates available from the October 1965 CPS enumeration data for a sample of the pupils in each school.

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON, D.C. 20233

OFFICE OF THE DIRECTOR

BUDGET BUREAU NO. 41-6561
APPROVAL EXPIRES SEPTEMBER 30, 1966

Dear Principal:

The Bureau of the Census is conducting a survey for the Department of Health, Education, and Welfare to obtain vitally needed information from parents and from the young people themselves, on their educational plans and their attitudes toward school in general. As an important part of this study, we also have been asked to obtain information about the schools these children attend, as well as their performance in school. The data which you provide, along with that supplied earlier by the parents and the students, will be used in planning for the future educational needs of young people.

We would appreciate your completing both this School Questionnaire and the enclosed Pupil Questionnaire for each of the pupils attending your school who have been included in our survey. We recognize that it may be difficult to provide exact answers to all of the questions. For such cases, please give us your best estimate. The questions may be answered either from your records or from your general knowledge. It is not necessary for you to make a special inquiry to acquire the information.

We are required by law to hold the information you provide absolutely confidential. It will be published **only** in the form of statistical summaries. No pupil, school, or school system will be identifiable from any reports issued as a result of this survey.

Since this study is based on a sample of the total population, it is important to obtain complete responses from all schools. Please complete and return the questionnaires within 5 days in the enclosed envelope, which requires no postage. If you receive more than one School Questionnaire, please mark the second form "Duplicate" and return it with the other completed forms. Your cooperation in this survey will be greatly appreciated.

Sincerely yours,

A. Ross Eckler

A. Ross Eckler
Director
Bureau of the Census

Enclosures

NOTICE – All information which would permit identification of any individual, school, or school system will be held in strict confidence, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any purposes.

FORM CPS-554 (10-14-65)

1. Which of the following grades does your school include? *(Circle EACH grade you have.)*

K 1 2 3 4 5 6 7 8 9 10 11 12

2. Is this a public or private school?

1 ☐ Public 2 ☐ Private

3. If private, is the school –

1 ☐ **Roman Catholic?**
2 ☐ **Other denomination?**
3 ☐ **Other private?**

Please answer each of the following questions either from your records or from your general knowledge. Please enter "0" if the answer is none. (It is not necessary to make a special survey for this study.) Indicate the accuracy of your answer by circling one of the following:

A – VERY ACCURATE
B – REASONABLY ACCURATE
C – ROUGH ESTIMATE

4. How many FULL-TIME TEACHERS are currently assigned wholly to your school?

_____ A B C

Of this number of TEACHERS what percent –

a. are male? ____% A B C

b. are teaching full time for the first time this year? ____% A B C

c. are teaching full time in your school for the first time this year? ____% A B C

d. have been teaching full time for more than 10 years? ____% A B C

e. hold at least a master's degree? ____% A B C

f. are Negro? ____% A B C

g. are Mexican – American or Puerto Rican? ____% A B C

h. are interested in trying out new teaching ideas? ____% A B C

i. voluntarily help students with their school problems during their own free time? ____% A B C

5. How many PUPILS are currently enrolled in your school?

_____ A B C

Of this number of PUPILS what percent –

a. are male? ____% A B C

b. have IQ's greater that 120? ____% A B C

c. have IQ's less than 90? ____% A B C

d. are in a college preparatory program? ____% A B C

e. are one or more grades behind other persons in their age group? ____% A B C

f. are one or more years behind their grade level in reading achievement? ____% A B C

g. went to some other school last year? *(DO NOT include pupils who entered the lowest grade of your school in September.)* ____% A B C

h. are uncooperative with their teachers? ____% A B C

Please estimate the percent of pupils in the following groups on the basis of your present knowledge.

What percent –

i. are Negro? ____% A B C

j. are Mexican – American or Puerto Rican? ____% A B C

k. are Protestant? ____% A B C

l. are Catholic? ____% A B C

m. are Jewish? ____% A B C

n. have a father (or guardian) who is a college graduate? ____% A B C

o. have a father (or guardian) who did not finish high school? ____% A B C

p. have a father (or guardian) who is a white collar worker (professional, managerial, clerical, or sales worker, etc.) ____% A B C

q. have a father (or guardian) who is a factory worker, mechanic, farm worker, etc. – that is, not a white collar worker? ____% A B C

FORM CPS-554 (10-14-65) USCOMM-DC

6. Was your school in operation in 1960?

1 ☐ Yes *(Go to question 7)*
X ☐ No *(Skip to question 11)*

7. During the 1960-61 school year what percent of the PUPILS attending your school were Negro? ____% A B C

8. During the 1960-61 school year what percent of the TEACHERS assigned to your school were Negro? ____% A B C

9. During the 1960-61 school year what percent of the PUPILS attending your school were Mexican-American or Puerto Rican? ____% A B C

10. During the 1960-61 school year what percent of the TEACHERS assigned to your school were Mexican-American or Puerto Rican? ____% A B C

11. Currently what is the average IQ of pupils in your school? ____% A B C

12. How would you rate the current condition of your physical plant? *(Check one)*

1 ☐ Needs major renovations
2 ☐ Needs minor renovations
3 ☐ In good condition

13. a. Does your school now have a room set aside as a centralized school library?

1 ☐ Yes   2 ☐ No

b. If yes, how many catalogued volumes are there in this library? ______volumes

14. Does your school have a shop with power tools?

1 ☐ Yes   2 ☐ No

15. Does your school have a room used only for typing instruction?

1 ☐ Yes
2 ☐ No
3 ☐ We offer no course in typing

16. How are textbooks provided for your students?
(Check the response which best describes your program.)

1 ☐ All textbooks are free
2 ☐ Rental plan with no waivers of rental fees
3 ☐ Rental plan with fees waived or reduced for certain students
4 ☐ All students buy their own books
5 ☐ Certain students receive books free, but all others buy their books
6 ☐ Students buy some books, receive others free

17. In full-time equivalents, how many teachers do you have in your school who teach remedial reading classes?

1 ☐ None
2 ☐ One, less than full time
3 ☐ One, full time
4 ☐ One, full time and one part time
5 ☐ Two
6 ☐ Three
7 ☐ Four or more

18. During the 1964-65 school year, did your school have a 12th grade?

1 ☐ Yes *(Answer question 19)*
X ☐ No *(Skip to question 21)*

19. How many students graduated from the 12th grade during the 1964-65 school year? ____ A B C

Of this number of graduates what percent –

a. are now enrolled in a four-year college? ____% A B C

b. are now enrolled in a two-year college? ____% A B C

c. went on to some post-high-school education or training other than college, such as beauty school, technical-vocational school, or business school? ____% A B C

20. a. What percent of the BOYS who entered your 10th grade in the fall of 1962 "dropped out" before the graduation of their class in 1965? ____% A B C

Not in operation in 1962 4 ☐
No boys in this school 5 ☐

b. What percent of the GIRLS who entered your 10th grade in the fall of 1962 "dropped out" before the graduation of their class in 1965? ____% A B C

Not in operation in 1962 4 ☐
No girls in this school 5 ☐

21. Information about the person completing this form:

a. Name: ____________________

b. Position: ____________________

c. In what year were you first assigned to this school?

19______

Appendix C. Detailed Descriptive Tables

Presented below are detailed descriptive tables in which the major variables considered in Chapters Nine through Twelve of this report have been summarized by type of school and by regional, metropolitanizational, social class, and racial contexts. Because of sampling and nonresponse problems noted in Chapter Thirteen, caution should be exercised in generalizing these results beyond the SCS sample itself. Nevertheless, in those cases where comparable data are available these results have been found to be quite representative of all American elementary and secondary schools during the 1965-66 school year.

The operational definitions for the various types of schools as well as for their regional, metropolitanizational, social class, and racial contexts are discussed in Chapter Nine. The number in parentheses in the upper right hand corner of each table identifies the questionnaire item being tabulated. The specific wording and coding of each item is presented in Appendix B of this report.

TABLE CA- 1. MEAN NUMBER OF FULL-TIME TEACHERS,
BY TYPE OF SCHOOL AND REGIONAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	36.7	7613	26.6	1030	33.1	2004	37.3	1078	39.9	1374	42.6	2127
ALL PUBLIC SCHOOLS	40.3	6209	27.4	962	36.3	1650	42.3	785	43.0	1213	49.0	1599
K1-5,K1-6	21.2	1951	18.6	233	19.8	529	21.0	249	20.8	434	24.1	506
K1-7,K1-8,K1-9	22.7	540	16.9	166	21.0	137	28.0	73	26.4	73	28.8	91
6-8,7-8,6-9,7-9,8-9	44.9	1102	34.1	111	39.4	278	43.9	167	45.9	262	54.0	284
7-12	51.9	308	32.0	61	52.2	96	69.0	21	70.5	15	56.6	115
9-12,10-12	71.8	1461	43.6	159	61.8	365	76.0	189	74.9	350	87.5	398
K1-12	39.3	333	31.8	113	39.4	117	46.7	29	26.6	20	55.4	54
OTHER	25.4	514	24.8	119	27.2	128	25.5	57	22.3	59	25.5	151
ALL NON-PUBLIC SCHOOLS	20.9	1388	15.0	64	18.0	350	23.9	291	16.6	158	23.0	525
ALL CATHOLIC SCHOOLS	20.5	1185	11.8	41	18.0	292	22.8	266	16.2	121	22.7	465
K1-5,K1-6,K1-7,K1-8,K1-9	14.3	701	10.7	24	12.9	179	16.4	145	11.4	78	15.2	275
9-12,10-12	35.0	333	13.1	12	31.0	77	36.9	77	27.1	35	40.3	132
OTHER	17.4	151	14.0	5	15.5	36	19.1	44	14.5	8	18.0	58
ALL NON-CATH.,CHURCH REL.	14.9	95	23.0	10	8.0	26	22.8	13	9.9	22	19.5	24
ALL NON-CATH.,NON-CHURCH REL.	29.3	89	15.1	10	24.3	26	53.1	9	31.5	13	30.2	31
UNKNOWN	31.5	19	31.7	3	34.7	6	42.3	3	18.5	2	26.2	5
TYPE OF CONTROL UNKNOWN	23.2	16	24.7	4	25.2	4	13.5	2	18.0	3	30.3	3

TABLE CA- 2. MEAN PERCENTAGE OF TEACHERS WHO ARE MALE, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	30.8	7669	24.1	1035	29.2	2018	31.7	1081	36.2	1389	31.7	2146
ALL PUBLIC SCHOOLS	33.3	6265	23.9	968	31.0	1666	35.8	789	38.5	1227	36.1	1615
K1-5,K1-6	10.8	1961	6.9	227	9.1	534	11.4	253	13.6	437	11.5	510
K1-7,K1-8,K1-9	19.8	546	13.6	168	21.1	137	21.4	74	26.5	72	22.9	95
6-8,7-8,6-9,7-9,8-9	48.3	1114	32.7	112	45.0	282	54.2	166	52.5	268	50.4	286
7-12	52.7	311	43.8	62	50.2	96	65.2	21	57.1	15	56.6	117
9-12,10-12	55.7	1482	43.5	163	51.5	372	58.3	188	62.4	356	57.3	403
K1-12	36.5	337	30.5	117	39.0	117	38.4	29	40.1	20	41.6	54
OTHER	22.3	514	19.2	119	20.5	128	22.5	58	23.1	59	25.8	150
ALL NON-PUBLIC SCHOOLS	19.9	1388	26.4	63	20.9	348	20.6	290	18.9	159	18.5	528
ALL CATHOLIC SCHOOLS	16.5	1183	23.0	40	17.8	290	17.8	265	13.9	122	15.1	466
K1-5,K1-6,K1-7,K1-8,K1-9	3.1	695	4.3	23	3.0	175	5.6	146	2.3	78	2.1	273
9-12,10-12	43.9	335	51.8	12	49.3	78	41.5	75	38.4	36	42.9	134
OTHER	17.3	153	40.0	5	21.1	37	18.0	44	16.9	8	12.5	59
ALL NON-CATH.,CHURCH REL.	38.0	94	28.5	10	31.8	25	50.9	13	40.2	22	39.3	24
ALL NON-CATH.,NON-CHURCH REL.	41.5	90	35.7	10	44.4	27	41.3	9	29.8	13	45.8	31
UNKNOWN	40.0	21	33.3	3	21.2	6	72.3	3	22.5	2	50.3	7
TYPE OF CONTROL UNKNOWN	18.7	16	20.2	4	17.0	4	22.5	2	13.3	3	22.0	3

TABLE CA- 3. MEAN PERCENTAGE OF TEACHERS WITH AT LEAST A MASTERS DEGREE, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

(CPS-55404E)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	24.6	7375	21.2	1010	21.3	1957	26.3	1037	22.9	1319	29.6	2052
ALL PUBLIC SCHOOLS	25.4	6024	21.5	944	21.8	1611	28.0	756	23.3	1165	31.9	1548
K1-5,K1-6	16.2	1910	17.7	226	14.1	523	16.0	247	11.8	423	21.6	491
K1-7,K1-8,K1-9	16.8	524	13.6	168	14.7	136	24.5	63	17.2	67	20.4	90
6-8,7-8,6-9,7-9,8-9	29.3	1053	28.3	105	25.6	267	31.5	161	23.8	248	37.0	272
7-12	28.5	302	24.8	60	24.5	93	40.1	18	28.1	15	31.8	116
9-12,10-12	41.3	1409	34.9	157	36.2	355	45.0	179	39.1	337	48.9	381
K1-12	19.5	332	18.4	114	17.1	115	18.7	30	26.7	19	25.1	54
OTHER	18.6	494	17.2	114	14.8	122	21.9	58	17.9	56	22.0	144
ALL NON-PUBLIC SCHOOLS	20.9	1335	17.7	62	19.1	342	21.5	279	19.7	151	22.6	501
ALL CATHOLIC SCHOOLS	19.9	1136	16.2	39	17.8	287	20.7	254	18.6	114	21.5	442
K1-5,K1-6,K1-7,K1-8,K1-9	8.7	665	5.0	24	7.1	173	9.6	140	10.3	72	9.3	256
9-12,10-12	41.6	324	29.2	11	40.6	77	43.5	73	33.4	34	44.3	129
OTHER	22.6	147	47.7	4	20.2	37	18.2	41	30.5	8	24.5	57
ALL NON-CATH.,CHURCH REL.	21.1	93	17.2	10	14.8	25	29.0	13	15.1	22	31.0	23
ALL NON-CATH.,NON-CHURCH REL.	31.9	86	21.5	10	38.5	24	27.4	9	34.5	13	30.4	30
UNKNOWN	31.8	20	26.7	3	25.2	6	34.3	3	37.0	2	38.2	6
TYPE OF CONTROL UNKNOWN	17.6	16	5.5	4	16.2	4	25.0	2	37.0	3	11.3	3

(CPS-55405)

TABLE CA- 4. MEAN NUMBER OF PUPILS ENROLLED,
BY TYPE OF SCHOOL AND REGIONAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	861	7663	647	1036	783	2018	923	1081	968	1376	936	2152
ALL PUBLIC SCHOOLS	913	6258	666	971	836	1664	999	790	1031	1217	1009	1616
K1-5,K1-6	600	1966	519	233	561	535	642	253	623	433	638	512
K1-7,K1-8,K1-9	596	547	481	170	536	138	822	72	611	73	709	94
6-8,7-8,6-9,7-9,8-9	977	1114	784	112	901	282	988	166	1077	267	1027	287
7-12	1064	312	699	62	1127	95	1463	21	1400	15	1091	119
9-12,10-12	1482	1477	960	161	1288	370	1603	192	1685	350	1636	404
K1-12	862	333	749	114	829	116	974	29	532	20	1233	54
OTHER	609	509	612	119	649	128	645	57	536	59	586	146
ALL NON-PUBLIC SCHOOLS	629	1389	351	61	532	350	721	289	484	156	717	533
ALL CATHOLIC SCHOOLS	675	1188	340	41	565	292	740	264	537	119	769	472
K1-5,K1-6,K1-7,K1-8,K1-9	615	706	375	24	523	179	683	145	492	76	693	282
9-12,10-12	850	332	262	12	714	76	885	75	639	36	1017	133
OTHER	565	150	364	5	464	37	679	44	505	7	568	57
ALL NON-CATH.,CHURCH REL.	245	92	272	8	175	25	360	13	201	22	285	24
ALL NON-CATH.,NON-CHURCH REL.	414	88	333	9	469	27	654	9	466	13	294	30
UNKNOWN	654	21	767	3	713	6	804	3	558	2	518	7
TYPE OF CONTROL UNKNOWN	543	16	552	4	592	4	363	2	494	3	631	3

(CPS-55405E)

TABLE CA- 5. MEAN PERCENTAGE OF PUPILS AT LEAST ONE YEAR BEHIND THEIR AGE GROUP, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	10.1	7248	14.2	990	10.0	1919	9.2	1021	8.9	1312	9.4	2006
ALL PUBLIC SCHOOLS	10.8	5955	14.6	929	10.6	1586	10.0	753	9.3	1164	10.2	1523
K1-5,K1-6	10.7	1874	14.6	219	11.1	521	9.9	240	9.2	416	10.1	478
K1-7,K1-8,K1-9	12.7	525	18.1	164	10.8	133	11.4	71	8.9	67	9.6	90
6-8,7-8,6-9,7-9,8-9	10.4	1068	12.8	106	10.9	273	8.7	159	9.0	257	11.3	273
7-12	9.9	303	12.0	61	10.1	91	13.5	21	16.2	15	7.1	115
9-12,10-12	9.4	1392	11.4	155	9.4	345	8.5	182	9.1	333	9.2	377
K1-12	12.4	325	16.3	113	8.0	109	9.9	28	13.6	20	14.1	55
OTHER	13.5	468	15.3	111	14.0	114	16.4	52	9.4	56	12.2	135
ALL NON-PUBLIC SCHOOLS	6.9	1278	7.3	57	6.9	329	7.1	266	5.7	146	7.0	480
ALL CATHOLIC SCHOOLS	6.5	1088	6.2	35	6.7	276	6.8	244	6.1	110	6.3	423
K1-5,K1-6,K1-7,K1-8,K1-9	7.9	634	7.7	21	7.9	169	8.4	131	7.8	71	7.6	242
9-12,10-12	3.8	317	4.1	10	4.9	74	4.1	72	2.9	32	3.2	129
OTHER	6.3	137	4.0	4	4.6	33	6.5	41	3.4	7	7.8	52
ALL NON-CATH.,CHURCH REL.	7.1	87	8.8	9	10.6	21	5.2	12	2.8	21	8.0	24
ALL NON-CATH.,NON-CHURCH REL.	10.0	86	5.3	10	6.5	26	8.3	9	6.6	13	17.0	28
UNKNOWN	13.2	17	21.7	3	7.3	6	80.0	1	6.0	2	4.6	5
TYPE OF CONTROL UNKNOWN	11.5	15	8.5	4	14.0	4	5.0	2	12.0	2	16.0	3

TABLE CA- 6. MEAN PERCENTAGE OF PUPILS AT LEAST ONE YEAR BEHIND THEIR GRADE LEVEL IN READING, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

(CPS-55405F)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	20.3	7215	26.4	981	20.5	1908	18.5	1023	18.4	1312	19.4	1991
ALL PUBLIC SCHOOLS	21.4	5923	26.9	923	21.4	1577	19.5	753	19.3	1162	20.6	1508
K1-5,K1-6	18.8	1865	23.4	217	18.8	516	16.8	239	17.4	416	19.0	477
K1-7,K1-8,K1-9	22.9	525	31.2	165	20.5	133	19.3	72	16.8	65	18.5	90
6-8,7-8,6-9,7-9,8-9	23.0	1066	23.9	108	23.6	271	22.5	164	21.1	254	24.0	269
7-12	23.2	294	26.5	59	25.8	93	24.4	20	24.2	13	18.9	109
9-12,10-12	21.5	1380	26.0	153	22.1	337	19.3	179	20.3	339	21.4	372
K1-12	25.6	320	33.8	112	19.9	108	18.7	27	22.3	20	24.2	53
OTHER	22.0	473	24.6	109	24.3	119	21.2	52	18.8	55	19.5	138
ALL NON-PUBLIC SCHOOLS	15.4	1277	17.7	54	16.1	327	15.9	268	11.5	148	15.7	480
ALL CATHOLIC SCHOOLS	15.9	1087	16.9	31	16.7	274	16.1	246	12.6	112	16.1	424
K1-5,K1-6,K1-7,K1-8,K1-9	17.2	646	18.3	20	17.6	168	17.5	135	13.8	73	17.8	250
9-12,10-12	12.9	303	15.9	7	13.4	73	13.7	70	10.4	32	12.6	121
OTHER	16.3	138	11.7	4	19.7	33	15.6	41	11.1	7	15.7	53
ALL NON-CATH.,CHURCH REL.	11.8	87	22.5	10	17.3	21	9.3	12	6.4	21	8.4	23
ALL NON-CATH.,NON-CHURCH REL.	12.3	84	8.2	10	9.5	26	11.3	7	9.8	13	17.7	28
UNKNOWN	18.4	19	41.7	3	11.5	6	32.0	3	15.0	2	6.0	5
TYPE OF CONTROL UNKNOWN	22.1	15	24.0	4	29.7	4	22.5	2	10.0	2	17.3	3

TABLE CA- 7. MEAN PERCENTAGE OF NEGRO PUPILS, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

(CPS-554051)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	10.0	7496	17.9	1024	9.6	1965	11.3	1053	6.4	1354	8.2	2100
ALL PUBLIC SCHOOLS	11.4	6111	18.6	956	10.6	1616	14.2	767	6.9	1197	10.1	1575
K1-5,K1-6	11.7	1910	15.1	223	11.7	515	15.5	244	7.8	430	11.7	498
K1-7,K1-8,K1-9	14.2	533	23.2	168	7.9	133	19.0	72	1.8	68	12.1	92
6-8,7-8,6-9,7-9,8-9	11.2	1087	9.4	110	13.2	276	12.0	162	9.0	262	11.4	277
7-12	13.6	296	26.8	61	15.9	88	15.1	18	8.7	13	5.3	116
9-12,10-12	8.9	1452	10.8	161	9.1	366	11.3	187	6.2	347	9.1	391
K1-12	12.9	330	30.2	114	4.2	112	2.6	29	.4	20	5.1	55
OTHER	13.2	503	22.5	119	9.3	126	23.8	55	2.3	57	9.1	146
ALL NON-PUBLIC SCHOOLS	3.7	1370	9.1	64	5.2	345	3.6	284	2.9	155	2.4	522
ALL CATHOLIC SCHOOLS	3.5	1166	8.8	40	4.5	289	3.6	260	3.0	118	2.5	461
K1-5,K1-6,K1-7,K1-8,K1-9	4.3	687	9.8	23	5.6	176	4.3	141	3.5	76	3.1	271
9-12,10-12	2.7	332	10.4	12	2.3	77	3.3	75	2.4	35	2.0	133
OTHER	1.8	149	.4	5	3.4	36	1.7	44	.4	7	1.1	57
ALL NON-CATH.,CHURCH REL.	5.4	91	10.1	10	11.0	22	.6	13	3.8	22	2.4	24
ALL NON-CATH.,NON-CHURCH REL.	2.7	91	2.0	11	5.1	28	3.5	8	.3	13	1.6	31
UNKNOWN	13.6	20	35.3	3	16.8	6	21.0	3	.5	2	.3	6
TYPE OF CONTROL UNKNOWN	1.7	15	4.0	4	1.3	4	1.0	2	0.0	2	.7	3

TABLE CA- 8. MEAN PERCENTAGE OF PUPILS WHOSE FATHERS ARE WHITE COLLAR WORKERS, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

(CPS-55405P)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		****		REGIONAL CONTEXT			****		
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	38.5	7012	28.9	991	37.0	1883	40.4	998	42.7	1253	41.3	1887
ALL PUBLIC SCHOOLS	36.6	5737	27.4	928	34.7	1551	39.3	727	41.4	1107	39.6	1424
K1-5,K1-6	38.4	1808	33.9	222	36.4	505	39.8	232	41.6	405	39.1	444
K1-7,K1-8,K1-9	26.7	506	17.4	165	25.4	128	32.4	68	38.6	65	33.5	80
6-8,7-8,6-9,7-9,8-9	42.2	1021	39.4	105	38.7	263	43.7	157	45.1	241	43.1	255
7-12	30.7	290	19.7	58	28.8	88	33.3	19	37.1	15	36.8	110
9-12,10-12	40.3	1326	32.7	156	39.0	341	41.5	173	42.0	309	42.8	347
K1-12	18.6	324	15.7	112	19.7	110	17.8	29	16.9	20	23.4	53
OTHER	34.3	462	26.1	110	34.9	116	39.4	49	33.3	52	38.9	135
ALL NON-PUBLIC SCHOOLS	47.4	1259	53.2	59	47.9	328	43.6	269	53.4	143	46.5	460
ALL CATHOLIC SCHOOLS	44.5	1074	51.5	37	45.8	273	42.2	249	49.2	110	43.1	405
K1-5,K1-6,K1-7,K1-8,K1-9	41.4	630	48.7	23	42.3	165	40.5	137	44.4	71	39.8	234
9-12,10-12	50.3	307	57.8	9	55.4	73	45.1	70	56.8	33	47.9	122
OTHER	45.4	137	53.0	5	42.0	35	42.7	42	64.3	6	47.1	49
ALL NON-CATH.,CHURCH REL.	57.9	85	67.5	10	49.1	24	48.8	12	56.4	18	69.8	21
ALL NON-CATH.,NON-CHURCH REL.	73.0	83	53.0	9	68.9	26	87.4	7	83.6	13	74.8	28
UNKNOWN	51.4	17	26.7	3	51.0	5	25.0	1	60.0	2	65.5	6
TYPE OF CONTROL UNKNOWN	30.2	16	20.0	4	44.0	4	32.5	2	24.0	3	30.0	3

TABLE CA- 9. MEAN SCHOOL IQ, BY TYPE OF SCHOOL AND REGIONAL CONTEXT (CPS-554011)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	103.0	6671	99.0	891	102.6	1790	103.3	949	103.1	1227	105.3	1814
ALL PUBLIC SCHOOLS	102.2	5464	98.4	834	101.7	1478	102.6	702	102.6	1092	104.6	1358
K1-5,K1-6	102.5	1710	99.3	194	101.5	475	102.7	224	103.1	392	104.6	425
K1-7,K1-8,K1-9	99.3	457	95.6	143	99.9	117	99.8	62	102.9	58	102.2	77
6-8,7-8,6-9,7-9,8-9	103.6	989	101.2	97	103.0	259	104.4	152	102.9	242	105.3	239
7-12	101.8	282	97.5	55	100.0	87	101.5	18	99.0	13	105.7	109
9-12,10-12	102.8	1311	99.7	146	102.7	326	103.0	172	102.1	323	104.7	344
K1-12	100.7	301	96.9	102	103.2	107	103.2	24	100.8	18	101.7	50
OTHER	100.6	414	98.3	97	98.7	107	98.9	50	101.0	46	104.9	114
ALL NON-PUBLIC SCHOOLS	106.8	1194	107.7	54	106.6	308	105.4	245	107.0	133	107.5	454
ALL CATHOLIC SCHOOLS	106.0	1021	106.6	35	105.8	259	105.1	224	105.8	101	106.5	402
K1-5,K1-6,K1-7,K1-8,K1-9	104.6	581	105.0	20	104.9	152	104.3	122	103.3	62	104.8	225
9-12,10-12	108.6	305	108.2	10	107.9	76	106.4	65	109.6	31	110.0	123
OTHER	106.0	135	109.4	5	105.6	31	105.1	37	110.1	8	105.9	54
ALL NON-CATH.,CHURCH REL.	110.8	76	115.4	8	106.1	19	109.5	10	109.3	19	115.5	20
ALL NON-CATH.,NON-CHURCH REL.	113.6	79	109.0	8	114.6	25	111.4	8	114.6	12	114.3	26
UNKNOWN	106.1	18	97.0	3	109.4	5	96.7	3	100.0	1	113.5	6
TYPE OF CONTROL UNKNOWN	105.0	13	101.3	3	103.7	4	102.0	2	110.0	2	111.0	2

TABLE CA- 10. PROPORTION OF SCHOOLS WITH A CENTRALIZED SCHOOL LIBRARY, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

(CPS-554013A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N
ALL SCHOOLS	.836	7724	.870	1044	.827	2031	.830	1091	.854	1393	.818	2165
ALL PUBLIC SCHOOLS	.847	6299	.873	975	.835	1674	.832	797	.865	1231	.838	1622
K1-5,K1-6	.725	1968	.741	232	.719	537	.692	253	.757	436	.714	510
K1-7,K1-8,K1-9	.685	550	.793	169	.635	137	.653	75	.649	74	.621	95
6-8,7-8,6-9,7-9,8-9	.975	1123	.974	114	.969	286	.982	168	.974	269	.979	286
7-12	.975	314	.984	62	.979	97	.952	21	.933	15	.975	119
9-12,10-12	.990	1491	1.000	163	.987	373	.984	192	.986	358	.995	405
K1-12	.916	335	.957	116	.868	114	.900	30	.950	20	.927	55
OTHER	.672	518	.832	119	.654	130	.655	58	.661	59	.572	152
ALL NON-PUBLIC SCHOOLS	.783	1410	.815	65	.791	354	.822	292	.761	159	.759	540
ALL CATHOLIC SCHOOLS	.777	1204	.829	41	.803	295	.816	267	.746	122	.741	479
K1-5,K1-6,K1-7,K1-8,K1-9	.654	711	.708	24	.693	179	.717	145	.615	78	.604	285
9-12,10-12	.994	340	1.000	12	1.000	79	1.000	78	1.000	36	.985	135
OTHER	.863	153	1.000	5	.919	37	.818	44	.875	8	.847	59
ALL NON-CATH.,CHURCH REL.	.755	94	.800	10	.480	25	.846	13	.818	22	.917	24
ALL NON-CATH.,NON-CHURCH REL.	.857	91	.727	11	.853	28	.889	9	.846	13	.867	30
UNKNOWN	.952	21	1.000	3	1.000	6	1.000	3	.500	2	1.000	7
TYPE OF CONTROL UNKNOWN	.933	15	1.000	4	1.000	3	1.000	2	1.000	3	.667	3

TABLE CA- 11. PROPORTION OF SCHOOLS HAVING A SHOP WITH POWER TOOLS, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

(CPS-554014)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N
ALL SCHOOLS	.467	7682	.445	1037	.461	2015	.470	1082	.515	1389	.453	2159
ALL PUBLIC SCHOOLS	.554	6264	.467	968	.542	1661	.608	788	.573	1227	.578	1620
K1-5,K1-6	.017	1958	.013	231	.011	533	.048	249	.007	435	.018	510
K1-7,K1-8,K1-9	.338	547	.077	169	.304	135	.600	75	.479	73	.537	95
6-8,7-8,6-9,7-9,8-9	.930	1117	.777	112	.880	284	.976	165	.974	268	.972	288
7-12	.961	310	.867	60	.950	96	.952	21	.933	15	.992	118
9-12,10-12	.970	1484	.957	162	.965	370	.995	191	.997	358	.943	403
K1-12	.913	334	.862	116	.929	113	.967	30	.850	20	.982	55
OTHER	.333	514	.356	118	.354	130	.386	57	.276	58	.298	151
ALL NON-PUBLIC SCHOOLS	.081	1402	.092	65	.074	350	.099	292	.075	159	.075	536
ALL CATHOLIC SCHOOLS	.046	1195	0.000	41	.045	291	.067	267	.033	122	.042	474
K1-5,K1-6,K1-7,K1-8,K1-9	.011	706	0.000	24	.006	176	.007	145	.013	78	.018	283
9-12,10-12	.115	339	0.000	12	.139	79	.179	78	.083	36	.082	134
OTHER	.053	150	0.000	5	.028	36	.068	44	0.000	8	.070	57
ALL NON-CATH.,CHURCH REL.	.160	94	0.000	10	.200	25	.231	13	.182	22	.125	24
ALL NON-CATH.,NON-CHURCH REL.	.326	92	.273	11	.214	28	.556	9	.308	13	.387	31
UNKNOWN	.619	21	1.000	3	.333	6	1.000	3	0.000	2	.714	7
TYPE OF CONTROL UNKNOWN	.500	16	.750	4	.500	4	.500	2	.333	3	.333	3

TABLE CA- 12. MEAN EMPHASIS ON TYPING INSTRUCTION SCORE, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

(CPS-554015)

	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
TYPE AND SUBTYPE OF SCHOOL	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	1.054	7704	1.106	1040	1.021	2023	1.045	1085	1.099	1395	1.035	2161
ALL PUBLIC SCHOOLS	1.094	6285	1.110	971	1.062	1667	1.083	792	1.140	1233	1.088	1622
K1-5,K1-6	0.438	1961	0.511	229	0.415	532	0.452	250	0.443	438	0.416	512
K1-7,K1-8,K1-9	0.495	550	0.476	170	0.504	137	0.527	74	0.486	74	0.495	95
6-8,7-8,6-9,7-9,8-9	1.017	1124	0.807	114	0.800	285	1.083	168	1.320	269	0.993	288
7-12	1.962	312	1.968	62	1.979	97	1.905	21	1.867	15	1.966	117
9-12,10-12	1.968	1490	1.969	163	1.970	372	1.995	192	1.986	358	1.936	405
K1-12	1.883	334	1.877	114	1.878	115	1.900	30	1.900	20	1.891	55
OTHER	0.839	514	1.101	119	0.868	129	0.772	57	0.746	59	0.667	150
ALL NON-PUBLIC SCHOOLS	0.874	1403	1.015	65	0.830	352	0.945	291	0.786	159	0.873	536
ALL CATHOLIC SCHOOLS	0.880	1198	0.902	41	0.837	294	0.940	266	0.795	122	0.893	475
K1-5,K1-6,K1-7,K1-8,K1-9	0.368	707	0.417	24	0.298	178	0.354	144	0.295	78	0.435	283
9-12,10-12	1.826	340	1.583	12	1.835	79	1.949	78	1.861	36	1.763	135
OTHER	1.146	151	1.600	5	1.297	37	1.068	44	0.875	8	1.105	57
ALL NON-CATH.,CHURCH REL.	0.717	92	1.100	10	0.583	24	1.077	13	0.727	22	0.478	23
ALL NON-CATH.,NON-CHURCH REL.	0.826	92	1.091	11	0.786	28	0.667	9	0.846	13	0.806	31
UNKNOWN	1.429	21	2.000	3	1.667	6	1.667	3	0.500	2	1.143	7
TYPE OF CONTROL UNKNOWN	1.000	16	1.500	4	0.750	4	0.500	2	0.667	3	1.333	3

TABLE CA- 13. MEAN PERCENTAGE OF 12TH GRADE GRADUATES GOING TO FOUR-YEAR COLLEGES, BY TYPE OF SCHOOL AND REGIONAL CONTEXT (CPS-554019A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	36.1	2617	31.5	409	37.9	701	39.8	342	29.3	416	39.1	749
ALL PUBLIC SCHOOLS	32.3	2136	30.0	377	34.2	582	36.8	242	26.3	366	33.9	569
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	32.0	304	30.2	61	32.8	94	29.2	20	24.8	14	33.6	115
9-12,10-12	33.5	1415	33.9	161	35.6	353	38.7	184	26.2	328	35.1	389
K1-12	28.0	327	25.4	113	30.4	111	33.2	29	27.7	20	25.9	54
OTHER	30.9	90	26.9	42	37.1	24	26.7	9	30.5	4	36.3	11
ALL NON-PUBLIC SCHOOLS	53.3	477	52.9	29	56.3	118	47.1	100	51.6	50	55.2	180
ALL CATHOLIC SCHOOLS	50.3	383	54.5	16	53.7	95	45.4	88	44.2	37	52.1	147
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	51.9	315	62.4	12	54.7	74	48.5	72	42.5	33	53.7	124
OTHER	43.0	68	30.7	4	50.3	21	31.6	16	58.0	4	43.9	23
ALL NON-CATH.,CHURCH REL.	63.5	27	64.8	5	44.5	4	38.2	5	62.6	5	88.5	8
ALL NON-CATH.,NON-CHURCH REL.	70.1	55	49.2	5	73.0	16	91.6	5	79.4	8	64.2	21
UNKNOWN	47.8	12	30.3	3	67.0	3	30.0	2	0.0	0	55.5	4
TYPE OF CONTROL UNKNOWN	13.0	4	15.7	3	5.0	1	0.0	0	0.0	0	0.0	0

TABLE CA- 14. MEAN PERCENTAGE OF MALE FORMER 10TH GRADERS WHO DROPPED OUT, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

(CPS-554020A)

					****	REGIONAL CONTEXT		****				
TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	9.0	2348	11.7	378	8.8	632	9.1	295	8.6	375	7.8	668
ALL PUBLIC SCHOOLS	9.6	2019	12.2	356	9.4	544	10.5	228	8.9	344	8.3	547
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	8.3	287	10.8	60	9.4	85	10.6	18	14.9	14	4.9	110
9-12,10-12	10.0	1334	12.5	150	10.3	330	11.2	176	8.7	307	9.2	371
K1-12	9.3	320	12.8	109	6.8	109	5.5	28	6.4	19	10.0	55
OTHER	9.9	78	11.6	37	8.6	20	15.7	6	9.8	4	3.6	11
ALL NON-PUBLIC SCHOOLS	4.7	325	2.6	19	4.9	87	4.0	67	5.7	31	5.1	121
ALL CATHOLIC SCHOOLS	4.2	251	.9	10	4.1	69	4.2	56	4.3	22	4.7	94
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	4.4	202	1.0	7	4.3	51	4.7	43	4.5	21	4.5	80
OTHER	3.7	49	.7	3	3.6	18	2.6	13	0.0	1	5.8	14
ALL NON-CATH.,CHURCH REL.	6.6	24	3.8	4	5.6	5	3.8	5	10.5	4	9.2	6
ALL NON-CATH.,NON-CHURCH REL.	6.3	40	0.0	2	10.0	11	0.0	4	8.0	5	5.8	18
UNKNOWN	6.1	10	8.7	3	3.0	2	7.5	2	0.0	0	4.7	3
TYPE OF CONTROL UNKNOWN	13.7	4	5.0	3	40.0	1	0.0	0	0.0	0	0.0	0

(CPS-554020B)

TABLE CA- 15. MEAN PERCENTAGE OF FEMALE FORMER 10TH GRADERS WHO DROPPED OUT, BY TYPE OF SCHOOL AND REGIONAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	7.5	2333	10.5	374	7.8	619	7.3	302	6.9	378	6.1	660
ALL PUBLIC SCHOOLS	8.2	1999	10.9	354	8.2	539	8.7	227	7.3	342	6.9	537
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	7.0	284	9.2	59	8.1	85	8.6	17	8.8	14	4.4	109
9-12,10-12	8.4	1320	11.1	150	8.9	326	9.1	176	7.3	305	7.5	363
K1-12	8.3	317	11.6	108	6.0	108	5.0	28	5.7	19	8.8	54
OTHER	9.3	78	11.1	37	8.1	20	14.5	6	8.3	4	2.8	11
ALL NON-PUBLIC SCHOOLS	3.2	330	2.3	17	4.8	79	2.9	75	3.1	36	2.4	123
ALL CATHOLIC SCHOOLS	2.7	256	.6	7	3.5	61	3.0	65	2.6	26	2.2	97
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	2.7	207	.6	5	3.6	45	3.0	54	2.8	24	2.1	79
OTHER	2.6	49	.5	2	3.1	16	3.2	11	0.0	2	2.3	18
ALL NON-CATH.,CHURCH REL.	4.1	24	2.5	4	5.2	5	2.8	4	7.5	4	3.0	7
ALL NON-CATH.,NON-CHURCH REL.	5.4	39	1.3	3	13.7	10	0.0	4	2.2	6	3.6	16
UNKNOWN	4.6	11	7.0	3	1.0	3	7.0	2	0.0	0	4.3	3
TYPE OF CONTROL UNKNOWN	11.0	4	4.7	3	30.0	1	0.0	0	0.0	0	0.0	0

TABLE CA- 16. MEAN PERCENT OF FORMER 10TH GRADE ENROLLEES GOING TO ANY FORM OF HIGHER ED., BY TYPE OF SCHOOL AND REGIONAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** REGIONAL CONTEXT ****									
			SOUTHEAST		PLAINS		GT. LAKES		WEST		NORTHEAST	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	55.9	2101	48.6	296	55.5	523	55.3	278	60.6	361	57.3	643
ALL PUBLIC SCHOOLS	52.9	1777	47.2	279	52.1	447	52.3	207	58.9	332	53.2	512
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	51.1	251	44.7	44	50.7	73	47.6	13	56.0	14	53.9	107
9-12,10-12	54.0	1245	50.8	137	52.0	288	53.0	166	59.3	300	53.1	354
K1-12	49.5	212	44.3	68	51.8	67	52.2	20	55.4	14	50.8	43
OTHER	50.2	69	41.3	30	60.6	19	45.7	8	52.7	4	61.9	8
ALL NON-PUBLIC SCHOOLS	72.5	322	72.7	15	75.2	76	64.3	71	80.6	29	73.5	131
ALL CATHOLIC SCHOOLS	72.7	279	84.7	7	76.6	64	65.7	65	80.6	26	72.0	117
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	74.2	241	77.7	4	77.8	56	68.7	54	79.8	25	73.7	102
OTHER	63.2	38	94.0	3	68.2	8	51.4	11	100.0	1	60.5	15
ALL NON-CATH.,CHURCH REL.	76.7	15	83.0	3	57.3	3	64.7	3	71.5	2	98.0	4
ALL NON-CATH.,NON-CHURCH REL.	71.2	20	39.5	2	68.7	7	5.0	1	99.0	1	84.6	9
UNKNOWN	58.4	8	56.3	3	79.0	2	47.0	2	0.0	0	46.0	1
TYPE OF CONTROL UNKNOWN	62.0	2	62.0	2	0.0	0	0.0	0	0.0	0	0.0	0

TABLE CB- 1. MEAN NUMBER OF FULL-TIME TEACHERS,
BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

(CPS-55404)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		****	METROPOLITANIZATION CONTEXT				****		
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	36.7	7613	25.1	2148	37.8	2875	43.9	2137	50.7	453
ALL PUBLIC SCHOOLS	40.3	6209	26.3	1948	41.6	2321	51.7	1583	56.8	357
K1-5,K1-6	21.2	1951	16.5	545	20.8	771	25.5	598	27.3	37
K1-7,K1-8,K1-9	22.7	540	16.4	255	24.1	152	33.3	126	33.0	7
6-8,7-8,6-9,7-9,8-9	44.9	1102	31.3	226	43.0	467	56.9	343	41.8	66
7-12	51.9	308	34.8	129	58.2	104	79.5	45	61.9	30
9-12,10-12	71.8	1461	43.0	354	72.9	586	95.8	361	77.5	160
K1-12	39.3	333	32.2	230	61.5	50	75.0	17	36.8	36
OTHER	25.4	514	19.0	209	26.4	191	36.3	93	32.4	21
ALL NON-PUBLIC SCHOOLS	20.9	1388	12.6	196	21.5	546	21.9	551	28.3	95
ALL CATHOLIC SCHOOLS	20.5	1185	11.6	152	20.7	456	21.6	489	28.9	88
K1-5,K1-6,K1-7,K1-8,K1-9	14.3	701	9.6	93	14.7	270	15.5	316	11.9	22
9-12,10-12	35.0	333	16.9	29	35.7	127	38.0	124	36.4	53
OTHER	17.4	151	12.8	30	16.1	59	19.2	49	27.0	13
ALL NON-CATH.,CHURCH REL.	14.9	95	14.1	20	14.5	42	15.6	30	20.0	3
ALL NON-CATH.,NON-CHURCH REL.	29.3	89	16.6	20	35.4	37	31.6	28	20.2	4
UNKNOWN	31.5	19	22.5	4	35.3	11	30.0	4	0.0	0
TYPE OF CONTROL UNKNOWN	23.2	16	22.7	4	26.9	8	11.7	3	31.0	1

TABLE CB- 2. MEAN PERCENTAGE OF TEACHERS WHO ARE MALE, BY TYPE OF SCHOCL AND METROPOLITANIZATION CONTEXT

(CPS-55404A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	30.8	7669	30.3	2170	32.1	2899	27.1	2150	42.7	450
ALL PUBLIC SCHOOLS	33.3	6265	31.2	1972	35.1	2343	30.9	1594	43.6	356
K1-5,K1-6	10.8	1961	11.1	547	11.2	780	9.9	597	11.1	37
K1-7,K1-8,K1-9	19.8	546	19.2	258	20.4	153	20.2	128	23.7	7
6-8,7-8,6-9,7-9,8-9	48.3	1114	47.6	229	50.6	472	46.3	347	45.5	66
7-12	52.7	311	54.0	132	55.1	106	48.5	44	44.4	29
9-12,10-12	55.7	1482	55.2	365	58.0	592	53.3	365	53.7	160
K1-12	36.5	337	36.7	235	36.7	49	33.9	17	36.1	36
OTHER	22.3	514	17.8	206	23.5	191	26.1	96	37.0	21
ALL NON-PUBLIC SCHOOLS	19.9	1388	22.1	194	19.5	548	16.4	553	39.0	93
ALL CATHOLIC SCHOOLS	16.5	1183	15.0	151	16.2	455	13.5	490	37.8	87
K1-5,K1-6,K1-7,K1-8,K1-9	3.1	695	4.0	92	3.2	268	2.8	313	4.0	22
9-12,10-12	43.9	335	45.9	29	45.7	127	37.3	127	54.5	52
OTHER	17.3	153	19.1	30	11.9	60	19.8	50	28.4	13
ALL NON-CATH.,CHURCH REL.	38.0	94	46.2	19	33.5	42	38.5	30	44.3	3
ALL NON-CATH.,NON-CHURCH REL.	41.5	90	48.2	20	36.4	38	40.7	29	67.7	3
UNKNOWN	40.0	21	42.0	4	41.2	13	34.2	4	0.0	0
TYPE OF CONTROL UNKNOWN	18.7	16	14.7	4	21.1	8	11.0	3	39.0	1

TABLE CB- 3. MEAN PERCENTAGE OF TEACHERS WITH AT LEAST A MASTERS DEGREE, BY TYPE OF SCHOCL AND METROPOLITANIZATION CONTEXT

(CPS-55404E)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	24.6	7375	19.7	2110	25.3	2773	27.1	2051	31.6	441
ALL PUBLIC SCHOOLS	25.4	6024	19.8	1918	26.4	2244	29.4	1515	32.4	347
K1-5,K1-6	16.2	1910	13.2	539	15.9	754	19.3	580	16.0	37
K1-7,K1-8,K1-9	16.8	524	13.4	256	16.9	146	24.5	115	13.4	7
6-8,7-8,6-9,7-9,8-9	29.3	1053	26.3	218	28.7	447	32.0	325	29.9	63
7-12	28.5	302	25.1	129	31.4	103	32.1	41	28.1	29
9-12,10-12	41.3	1409	32.9	348	42.6	561	46.8	346	43.0	154
K1-12	19.5	332	17.7	230	24.0	50	31.2	16	20.0	36
OTHER	18.6	494	14.8	198	20.1	183	22.4	92	25.2	21
ALL NON-PUBLIC SCHOOLS	20.9	1335	19.1	188	20.6	521	20.5	533	28.8	93
ALL CATHOLIC SCHOOLS	19.9	1136	16.8	146	19.3	430	19.7	472	28.8	88
K1-5,K1-6,K1-7,K1-8,K1-9	8.7	665	5.8	89	7.9	251	10.3	303	8.8	22
9-12,10-12	41.6	324	41.2	28	42.8	121	43.0	122	35.8	53
OTHER	22.6	147	27.0	29	19.8	58	20.2	47	34.1	13
ALL NON-CATH.,CHURCH REL.	21.1	93	25.5	19	17.8	42	22.9	29	21.7	3
ALL NON-CATH.,NON-CHURCH REL.	31.9	86	29.0	19	32.9	37	32.2	28	37.5	2
UNKNOWN	31.8	20	23.7	4	39.7	12	16.5	4	0.0	0
TYPE OF CONTROL UNKNOWN	17.6	16	7.3	4	27.0	8	12.0	3	1.0	1

(CPS-55405)

TABLE CB- 4. MEAN NUMBER OF PUPILS ENROLLED,
BY TYPE OF SCHOCL AND METROPOLITANIZATION CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		****	METROPOLITANIZATION CONTEXT			****	
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	861	7663	581	2171	873	2896	1077	2147	1100	449
ALL PUBLIC SCHOOLS	913	6258	604	1971	930	2342	1206	1590	1200	355
K1-5,K1-6	600	1966	454	550	586	778	741	602	789	36
K1-7,K1-8,K1-9	596	547	440	261	636	153	856	126	850	7
6-8,7-8,6-9,7-9,8-9	977	1114	692	229	933	472	1241	346	896	67
7-12	1064	312	694	132	1149	106	1843	44	1246	30
9-12,10-12	1482	1477	869	361	1475	596	2059	362	1589	158
K1-12	862	333	706	232	1395	49	1657	16	789	36
OTHER	609	509	473	206	616	188	870	94	704	21
ALL NON-PUBLIC SCHOOLS	629	1389	351	196	632	546	709	554	724	93
ALL CATHOLIC SCHOOLS	675	1188	375	152	670	456	756	493	757	87
K1-5,K1-6,K1-7,K1-8,K1-9	615	706	366	94	624	270	692	320	460	22
9-12,10-12	850	332	377	29	834	128	964	123	880	52
OTHER	565	150	404	29	525	58	652	50	769	13
ALL NON-CATH.,CHURCH REL.	245	92	189	20	266	40	249	29	287	3
ALL NON-CATH.,NON-CHURCH REL.	414	88	296	20	527	37	373	28	183	3
UNKNOWN	654	21	509	4	701	13	647	4	0	0
TYPE OF CONTROL UNKNOWN	543	16	541	4	582	8	387	3	705	1

(CPS-55405E)

TABLE CB- 5. MEAN PERCENTAGE OF PUPILS AT LEAST ONE YEAR BEHIND THEIR AGE GROUP, BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	10.1	7248	10.8	2055	8.1	2745	11.9	2025	10.9	423
ALL PUBLIC SCHOOLS	10.8	5955	11.2	1873	8.5	2237	13.4	1507	12.1	338
K1-5,K1-6	10.7	1874	11.2	520	8.6	741	13.0	577	8.8	36
K1-7,K1-8,K1-9	12.7	525	14.1	249	9.7	144	13.2	125	16.3	7
6-8,7-8,6-9,7-9,8-9	10.4	1068	10.4	214	8.2	465	13.3	328	11.7	61
7-12	9.9	303	9.1	128	7.3	102	16.2	43	13.0	30
9-12,10-12	9.4	1392	8.8	347	7.6	563	12.6	331	10.3	151
K1-12	12.4	325	11.9	226	13.7	48	14.8	16	12.9	35
OTHER	13.5	468	12.9	189	10.2	174	17.9	87	29.9	18
ALL NON-PUBLIC SCHOOLS	6.9	1278	6.9	178	6.4	501	7.4	515	6.0	84
ALL CATHOLIC SCHOOLS	6.5	1088	6.1	137	5.8	418	7.4	454	5.7	79
K1-5,K1-6,K1-7,K1-8,K1-9	7.9	634	7.4	86	6.5	239	8.9	288	10.8	21
9-12,10-12	3.8	317	3.3	27	3.6	124	4.6	118	3.0	48
OTHER	6.3	137	4.7	24	7.9	55	5.0	48	7.7	10
ALL NON-CATH.,CHURCH REL.	7.1	87	6.8	19	6.8	37	7.4	28	8.7	3
ALL NON-CATH.,NON-CHURCH REL.	10.0	86	12.7	19	11.4	36	6.3	29	12.5	2
UNKNOWN	13.2	17	7.0	3	10.5	10	24.5	4	0.0	0
TYPE OF CONTROL UNKNOWN	11.5	15	11.0	4	8.7	7	19.0	3	10.0	1

TABLE CB- 6. MEAN PERCENTAGE OF PUPILS AT LEAST ONE YEAR BEHIND THEIR GRADE LEVEL IN READING, BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT (CPS-55405F)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	20.3	7215	21.0	2044	16.8	2743	23.9	2021	22.6	407
ALL PUBLIC SCHOOLS	21.4	5923	21.6	1860	17.6	2231	26.2	1501	24.0	331
K1-5,K1-6	18.8	1865	18.5	515	14.9	741	24.0	573	19.7	36
K1-7,K1-8,K1-9	22.9	525	25.1	248	17.8	146	24.1	124	30.3	7
6-8,7-8,6-9,7-9,8-9	23.0	1066	20.2	215	19.3	460	29.7	329	23.9	62
7-12	23.2	294	22.2	125	21.5	100	30.5	41	23.1	28
9-12,10-12	21.5	1380	22.0	343	18.4	561	25.5	330	23.2	146
K1-12	25.6	320	25.8	224	23.0	46	25.7	16	27.4	34
OTHER	22.0	473	20.5	190	18.3	177	30.4	88	32.4	18
ALL NON-PUBLIC SCHOOLS	15.4	1277	15.6	180	13.3	505	17.4	517	16.2	75
ALL CATHOLIC SCHOOLS	15.9	1087	15.3	140	13.4	421	18.3	456	16.4	70
K1-5,K1-6,K1-7,K1-8,K1-9	17.2	646	15.8	88	12.9	246	21.0	293	22.8	19
9-12,10-12	12.9	303	12.3	27	12.6	120	13.3	114	12.8	42
OTHER	16.3	138	17.0	25	17.4	55	14.1	49	19.2	9
ALL NON-CATH.,CHURCH REL.	11.8	87	17.2	18	10.3	38	9.9	28	16.7	3
ALL NON-CATH.,NON-CHURCH REL.	12.3	84	16.2	19	14.0	34	7.9	29	10.5	2
UNKNOWN	18.4	19	15.0	3	15.5	12	29.7	4	0.0	0
TYPE OF CONTROL UNKNOWN	22.1	15	24.0	4	18.7	7	30.0	3	15.0	1

(CPS-554051)

TABLE CB- 7. MEAN PERCENTAGE OF NEGRO PUPILS,
BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	10.0	7496	7.7	2122	4.5	2864	19.9	2070	10.3	440
ALL PUBLIC SCHOOLS	11.4	6111	8.3	1930	5.1	2315	24.8	1518	12.4	348
K1-5,K1-6	11.7	1910	6.7	538	4.9	769	25.4	569	16.6	34
K1-7,K1-8,K1-9	14.2	533	12.2	253	7.5	150	27.0	123	.7	7
6-8,7-8,6-9,7-9,8-9	11.2	1087	4.4	224	5.1	470	24.9	329	8.8	64
7-12	13.6	296	10.7	127	9.0	105	35.6	36	15.7	28
9-12,10-12	8.9	1452	4.6	358	3.9	587	19.6	349	13.3	158
K1-12	12.9	330	13.4	228	8.7	49	30.2	17	7.4	36
OTHER	13.2	503	11.3	202	5.1	185	32.0	95	16.9	21
ALL NON-PUBLIC SCHOOLS	3.7	1370	1.5	189	1.9	541	6.5	549	2.5	91
ALL CATHOLIC SCHOOLS	3.5	1168	.8	147	1.6	451	6.3	485	2.6	85
K1-5,K1-6,K1-7,K1-8,K1-9	4.3	687	.8	91	1.4	264	7.8	312	2.6	20
9-12,10-12	2.7	332	1.1	28	2.4	129	3.2	123	3.1	52
OTHER	1.8	149	.5	28	.3	58	4.5	50	.6	13
ALL NON-CATH.,CHURCH REL.	5.4	91	6.3	18	2.6	41	9.3	29	0.0	3
ALL NON-CATH.,NON-CHURCH REL.	2.7	91	2.5	20	3.8	37	1.6	31	2.0	3
UNKNOWN	13.6	20	1.5	4	8.8	12	40.2	4	0.0	0
TYPE OF CONTROL UNKNOWN	1.7	15	5.0	3	1.0	8	.3	3	1.0	1

TABLE CB- 8. MEAN PERCENTAGE OF PUPILS WHOSE FATHERS ARE WHITE COLLAR WORKERS, BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT (CPS-55405P)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	38.5	7012	28.1	2041	46.5	2681	38.6	1891	37.7	399
ALL PUBLIC SCHOOLS	36.6	5737	27.0	1858	44.8	2168	36.8	1390	36.3	321
K1-5,K1-6	38.4	1808	30.6	517	45.7	716	36.0	542	40.8	33
K1-7,K1-8,K1-9	26.7	506	17.1	242	38.7	144	32.7	113	14.7	7
6-8,7-8,6-9,7-9,8-9	42.2	1021	36.8	219	47.9	440	38.9	304	36.1	58
7-12	30.7	290	22.4	122	38.2	102	36.2	36	32.7	30
9-12,10-12	40.3	1326	31.7	339	45.5	544	39.8	301	41.9	142
K1-12	18.6	324	15.9	227	26.5	48	32.9	14	19.3	35
OTHER	34.3	462	26.9	192	44.6	174	29.6	80	32.7	16
ALL NON-PUBLIC SCHOOLS	47.4	1259	39.0	179	54.5	505	43.7	498	43.5	77
ALL CATHOLIC SCHOOLS	44.5	1074	37.1	141	51.4	421	40.6	441	42.4	71
K1-5,K1-6,K1-7,K1-8,K1-9	41.4	630	32.9	85	50.2	250	36.7	278	31.9	17
9-12,10-12	50.3	307	47.5	29	54.6	119	48.4	116	45.4	43
OTHER	45.4	137	39.0	27	49.5	52	44.4	47	46.5	11
ALL NON-CATH.,CHURCH REL.	57.9	85	39.8	17	69.1	37	56.1	28	38.3	3
ALL NON-CATH.,NON-CHURCH REL.	73.0	83	54.9	17	75.8	37	80.5	26	76.7	3
UNKNOWN	51.4	17	34.5	4	54.5	10	63.3	3	0.0	0
TYPE OF CONTROL UNKNOWN	30.2	16	23.7	4	26.0	8	55.0	3	15.0	1

TABLE CB- 9. MEAN SCHOOL IQ,
BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

(CPS-554011)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	103.0	6671	101.7	1865	105.1	2578	101.3	1844	103.9	384
ALL PUBLIC SCHOOLS	102.2	5464	101.2	1704	104.5	2105	99.8	1357	103.0	298
K1-5,K1-6	102.5	1710	102.1	468	104.9	694	99.8	521	102.9	27
K1-7,K1-8,K1-9	99.3	457	98.3	213	100.8	129	99.5	108	100.1	7
6-8,7-8,6-9,7-9,8-9	103.6	989	103.1	200	106.0	437	100.4	297	103.1	55
7-12	101.8	282	100.4	120	104.3	99	98.0	38	103.9	25
9-12,10-12	102.8	1311	102.1	329	104.2	544	100.4	304	104.1	134
K1-12	100.7	301	100.5	207	101.3	44	99.0	17	101.8	33
OTHER	100.6	414	100.1	167	103.6	158	96.2	72	95.9	17
ALL NON-PUBLIC SCHOOLS	106.8	1194	106.3	158	108.1	466	105.6	485	107.1	85
ALL CATHOLIC SCHOOLS	106.0	1021	105.5	123	107.4	387	104.6	432	107.0	79
K1-5,K1-6,K1-7,K1-8,K1-9	104.6	581	103.9	74	106.9	215	103.4	274	97.2	18
9-12,10-12	108.6	305	109.6	25	108.5	119	108.1	112	109.7	49
OTHER	106.0	135	106.3	24	107.0	53	103.5	46	110.6	12
ALL NON-CATH.,CHURCH REL.	110.8	76	109.1	17	109.6	33	114.1	23	108.0	3
ALL NON-CATH.,NON-CHURCH REL.	113.6	79	110.3	15	114.1	35	115.5	26	108.3	3
UNKNOWN	106.1	18	103.3	3	107.8	11	103.2	4	0.0	0
TYPE OF CONTROL UNKNOWN	105.0	13	104.0	3	106.0	7	104.5	2	102.0	1

TABLE CB- 10. PROPORTION OF SCHOOLS WITH A CENTRALIZED SCHOOL LIBRARY, BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

(CPS-554013A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N
ALL SCHOOLS	.836	7724	.784	2176	.848	2921	.850	2168	.930	459
ALL PUBLIC SCHOOLS	.847	6299	.786	1976	.861	2360	.881	1602	.939	361
K1-5,K1-6	.725	1968	.620	547	.738	781	.805	604	.722	36
K1-7,K1-8,K1-9	.685	550	.658	260	.712	153	.698	129	.875	8
6-8,7-8,6-9,7-9,8-9	.975	1123	.943	230	.977	477	.991	346	.986	70
7-12	.975	314	.970	132	.991	107	.933	45	1.000	30
9-12,10-12	.990	1491	.986	365	.992	600	.992	366	.987	160
K1-12	.916	335	.909	232	.940	50	1.000	17	.889	36
OTHER	.672	518	.610	210	.688	192	.747	95	.810	21
ALL NON-PUBLIC SCHOOLS	.783	1410	.760	156	.796	554	.758	563	.897	97
ALL CATHOLIC SCHOOLS	.777	1204	.778	153	.781	462	.751	498	.890	91
K1-5,K1-6,K1-7,K1-8,K1-9	.654	711	.691	94	.659	273	.642	321	.609	23
9-12,10-12	.994	340	.966	29	.992	129	1.000	127	1.000	55
OTHER	.863	153	.867	30	.883	60	.820	50	.923	13
ALL NON-CATH.,CHURCH REL.	.755	94	.600	20	.805	41	.767	30	1.000	3
ALL NON-CATH.,NON-CHURCH REL.	.857	91	.737	19	.921	38	.839	31	1.000	3
UNKNOWN	.952	21	1.000	4	.923	13	1.000	4	0.000	0
TYPE OF CONTROL UNKNOWN	.933	15	1.000	4	.857	7	1.000	3	1.000	1

TABLE CB- 11. PROPORTION OF SCHOOLS HAVING A SHOP WITH POWER TOOLS, BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT (CPS-554014)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N
ALL SCHOOLS	.467	7682	.467	2166	.469	2905	.424	2153	.668	458
ALL PUBLIC SCHOOLS	.554	6264	.499	1970	.560	2347	.553	1587	.817	360
K1-5,K1-6	.017	1958	.015	546	.014	781	.024	595	0.000	36
K1-7,K1-8,K1-9	.338	547	.170	259	.412	153	.583	127	.500	8
6-8,7-8,6-9,7-9,8-9	.930	1117	.843	230	.945	473	.974	344	.900	70
7-12	.961	310	.938	130	.990	105	.933	45	1.000	30
9-12,10-12	.970	1484	.975	365	.980	594	.959	366	.943	159
K1-12	.913	334	.905	231	.940	50	.941	17	.917	36
OTHER	.333	514	.244	209	.319	191	.484	93	.667	21
ALL NON-PUBLIC SCHOOLS	.081	1402	.130	192	.078	550	.060	563	.113	97
ALL CATHOLIC SCHOOLS	.046	1195	.054	148	.031	458	.046	498	.110	91
K1-5,K1-6,K1-7,K1-8,K1-9	.011	706	.011	92	.004	270	.016	321	.043	23
9-12,10-12	.115	339	.172	29	.078	128	.118	127	.164	55
OTHER	.053	150	.074	27	.050	60	.060	50	0.000	13
ALL NON-CATH.,CHURCH REL.	.160	94	.300	20	.171	41	.067	30	0.000	3
ALL NON-CATH.,NON-CHURCH REL.	.326	92	.400	20	.368	38	.226	31	.333	3
UNKNOWN	.619	21	.750	4	.615	13	.500	4	0.000	0
TYPE OF CONTROL UNKNOWN	.500	16	.500	4	.500	8	.333	3	1.000	1

(CPS-554015)

TABLE CB- 12. MEAN EMPHASIS ON TYPING INSTRUCTION SCORE,
BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	1.054	7704	1.061	2170	1.014	2915	1.004	2162	1.512	457
ALL PUBLIC SCHOOLS	1.094	6285	1.082	1972	1.059	2356	1.064	1598	1.532	359
K1-5,K1-6	0.438	1961	0.454	546	0.434	778	0.428	601	0.417	36
K1-7,K1-8,K1-9	0.495	550	0.477	260	0.484	153	0.550	129	0.375	8
6-8,7-8,6-9,7-9,8-9	1.017	1124	0.823	231	0.901	477	1.303	346	1.029	70
7-12	1.962	312	1.970	132	1.991	106	1.844	45	2.000	29
9-12,10-12	1.968	1490	1.962	364	1.987	600	1.959	366	1.931	160
K1-12	1.883	334	1.853	232	1.940	50	2.000	17	1.943	35
OTHER	0.839	514	0.807	207	0.792	192	0.926	94	1.190	21
ALL NON-PUBLIC SCHOOLS	0.874	1403	0.851	194	0.822	551	0.836	561	1.433	97
ALL CATHOLIC SCHOOLS	0.880	1198	0.827	150	0.837	460	0.831	497	1.451	91
K1-5,K1-6,K1-7,K1-8,K1-9	0.368	707	0.333	93	0.351	271	0.394	320	0.348	23
9-12,10-12	1.826	340	1.931	29	1.822	129	1.803	127	1.836	55
OTHER	1.146	151	1.321	28	0.917	60	1.160	50	1.769	13
ALL NON-CATH.,CHURCH REL.	0.717	92	0.700	20	0.600	40	0.828	29	1.333	3
ALL NON-CATH.,NON-CHURCH REL.	0.826	92	1.000	20	0.711	38	0.839	31	1.000	3
UNKNOWN	1.429	21	1.750	4	1.308	13	1.500	4	0.000	0
TYPE OF CONTROL UNKNOWN	1.000	16	1.000	4	1.000	8	0.667	3	2.000	1

TABLE CB- 13. MEAN PERCENTAGE OF 12TH GRADE GRADUATES GOING TO FOUR-YEAR COLLEGES, BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

(CPS-554019A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	36.1	2617	31.5	811	38.6	922	38.2	596	36.6	288
ALL PUBLIC SCHOOLS	32.3	2136	29.9	743	34.4	741	32.7	426	32.8	226
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	32.0	304	30.9	128	33.1	105	36.0	42	27.1	29
9-12,10-12	33.5	1415	32.0	353	34.7	563	32.8	347	33.8	152
K1-12	28.0	327	26.2	225	30.9	49	31.8	17	33.5	36
OTHER	30.9	90	28.0	37	40.1	24	24.9	20	31.7	9
ALL NON-PUBLIC SCHOOLS	53.3	477	50.7	66	56.0	180	52.2	170	51.1	61
ALL CATHOLIC SCHOOLS	50.3	383	52.8	45	52.7	138	47.3	143	50.0	57
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	51.9	315	54.9	28	53.3	120	49.3	119	53.0	48
OTHER	43.0	68	49.4	17	48.4	18	37.7	24	34.4	9
ALL NON-CATH.,CHURCH REL.	63.5	27	55.4	8	71.1	9	59.1	8	79.0	2
ALL NON-CATH.,NON-CHURCH REL.	70.1	55	43.1	10	71.2	26	86.3	17	53.5	2
UNKNOWN	47.8	12	32.3	3	45.1	7	80.5	2	0.0	0
TYPE OF CONTROL UNKNOWN	13.0	4	11.0	2	5.0	1	0.0	0	25.0	1

TABLE CB- 14. MEAN PERCENTAGE OF MALE FORMER 10TH GRADERS WHO DROPPED OUT, BY TYPE OF SCHOCL AND METROPOLITANIZATION CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** METROPOLITANIZATION CONTEXT ****							
			NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	9.0	2348	8.7	766	6.9	837	12.1	485	10.8	260
ALL PUBLIC SCHOOLS	9.6	2019	9.0	710	7.2	712	14.0	382	12.3	215
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	8.3	287	8.4	124	6.0	99	12.5	34	10.9	30
9-12,10-12	10.0	1334	9.0	332	7.4	543	14.3	314	12.5	145
K1-12	9.3	320	9.4	221	6.6	47	9.3	16	12.1	36
OTHER	9.9	78	8.5	33	6.7	23	15.6	18	15.0	4
ALL NON-PUBLIC SCHOOLS	4.7	325	4.9	54	5.0	124	4.9	103	3.5	44
ALL CATHOLIC SCHOOLS	4.2	251	2.0	36	4.7	91	5.6	84	2.3	40
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	4.4	202	2.5	23	4.8	79	5.5	67	2.2	33
OTHER	3.7	49	1.1	13	4.0	12	5.9	17	2.6	7
ALL NON-CATH.,CHURCH REL.	6.6	24	12.0	7	7.7	7	2.0	8	2.5	2
ALL NON-CATH.,NON-CHURCH REL.	6.3	40	10.5	8	4.8	19	2.0	11	28.5	2
UNKNOWN	6.1	10	7.7	3	5.4	7	0.0	0	0.0	0
TYPE CF CONTROL UNKNOWN	13.7	4	2.5	2	40.0	1	0.0	0	10.0	1

TABLE CB- 15. MEAN PERCENTAGE OF FEMALE FORMER 10TH GRADERS WHO DROPPED OUT, BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

(CPS-554020B)

			****	METROPOLITANIZATION CONTEXT			****			
TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	7.5	2333	7.7	758	5.6	829	9.7	494	9.1	252
ALL PUBLIC SCHOOLS	8.2	1999	8.0	704	6.1	708	11.8	376	10.0	211
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	7.0	284	6.7	123	5.9	98	9.6	33	8.6	30
9-12,10-12	8.4	1320	7.9	329	6.1	540	12.2	309	10.1	142
K1-12	8.3	317	8.6	219	6.0	47	7.7	16	9.4	35
OTHER	9.3	78	8.4	33	5.3	23	13.6	18	20.2	4
ALL NON-PUBLIC SCHOOLS	3.2	330	4.6	52	2.6	120	2.8	118	4.2	40
ALL CATHOLIC SCHOOLS	2.7	256	2.2	32	2.3	88	3.1	99	2.8	37
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	2.7	207	2.2	19	2.6	77	2.9	81	2.9	30
OTHER	2.6	49	2.2	13	.6	11	4.0	18	2.7	7
ALL NON-CATH.,CHURCH REL.	4.1	24	7.6	9	3.0	7	1.3	7	0.0	1
ALL NON-CATH.,NON-CHURCH REL.	5.4	39	9.5	8	3.1	18	1.5	11	31.5	2
UNKNOWN	4.6	11	7.7	3	4.0	7	0.0	1	0.0	0
TYPE OF CONTROL UNKNOWN	11.0	4	1.0	2	30.0	1	0.0	0	12.0	1

TABLE CB- 16. MEAN PERCENT OF FORMER 10TH GRADE ENROLLEES GOING TO ANY FORM OF HIGHER ED., BY TYPE OF SCHOOL AND METROPOLITANIZATION CONTEXT

				****	METROPOLITANIZATION CONTEXT				****	
TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		NON-SMSA		SMSA-R		SMSA-CC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	55.9	2101	51.9	605	59.8	790	55.6	469	54.1	237
ALL PUBLIC SCHOOLS	52.9	1777	49.7	559	56.9	668	52.1	356	50.2	194
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	51.1	251	48.9	101	53.9	92	54.3	32	46.3	26
9-12,10-12	54.0	1245	51.0	292	57.6	522	52.4	297	50.6	134
K1-12	49.5	212	48.2	138	53.0	35	54.8	11	49.0	28
OTHER	50.2	69	47.1	28	58.9	19	40.1	16	63.8	6
ALL NON-PUBLIC SCHOOLS	72.5	322	77.7	45	75.9	122	66.7	113	72.5	42
ALL CATHOLIC SCHOOLS	72.7	279	80.9	28	76.5	103	67.1	108	72.7	40
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	74.2	241	80.2	22	77.0	96	68.9	91	76.9	32
OTHER	63.2	38	83.2	6	69.1	7	57.1	17	55.9	8
ALL NON-CATH.,CHURCH REL.	76.7	15	78.0	6	81.6	5	62.7	3	86.0	1
ALL NON-CATH.,NON-CHURCH REL.	71.2	20	70.7	9	81.2	9	5.0	1	53.0	1
UNKNOWN	58.4	8	64.5	2	47.6	5	100.0	1	0.0	0
TYPE OF CONTROL UNKNOWN	62.0	2	89.0	1	0.0	0	0.0	0	35.0	1

(CPS-55404)

TABLE CC- 1. MEAN NUMBER OF FULL-TIME TEACHERS,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		20-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	36.7	7613	27.1	1720	35.9	1795	40.6	1586	40.0	1798	45.0	714
ALL PUBLIC SCHOOLS	40.3	6209	28.9	1500	38.7	1530	45.3	1264	45.4	1347	51.1	568
K1-5,K1-6	21.2	1951	20.5	509	21.1	443	20.8	329	21.7	504	22.5	166
K1-7,K1-8,K1-9	22.7	540	18.2	227	23.9	123	26.8	83	28.6	63	27.0	44
6-8,7-8,6-9,7-9,8-9	44.9	1102	42.2	167	41.7	254	43.9	282	47.6	299	51.9	100
7-12	51.9	308	38.8	86	44.3	95	60.9	65	79.4	38	60.3	24
9-12,10-12	71.8	1461	50.2	192	64.2	403	73.2	367	80.5	338	95.1	161
K1-12	39.3	333	31.0	186	40.5	82	63.9	37	79.6	14	37.6	14
OTHER	25.4	514	22.5	133	22.8	130	26.0	101	31.5	91	27.4	59
ALL NON-PUBLIC SCHOOLS	20.9	1388	14.2	214	19.3	260	22.0	319	24.0	449	21.3	146
ALL CATHOLIC SCHOOLS	20.5	1185	14.0	194	19.6	241	22.5	283	23.0	343	21.3	124
K1-5,K1-6,K1-7,K1-8,K1-9	14.3	701	10.9	152	13.2	143	15.3	141	16.2	186	16.7	79
9-12,10-12	35.0	333	34.2	24	33.9	61	35.0	101	35.4	118	36.3	29
OTHER	17.4	151	13.3	18	20.3	37	16.4	41	17.7	39	17.2	16
ALL NON-CATH.,CHURCH REL.	14.9	95	6.5	13	10.3	11	11.5	17	20.4	44	13.2	10
ALL NON-CATH.,NON-CHURCH REL.	29.3	89	29.0	4	16.2	6	20.3	13	32.6	58	30.1	8
UNKNOWN	31.5	19	42.0	3	48.5	2	31.0	6	24.5	4	22.7	4
TYPE OF CONTROL UNKNOWN	23.2	16	24.5	6	25.2	5	21.3	3	17.5	2	0.0	0

TABLE CC- 2. MEAN PERCENTAGE OF TEACHERS WHO ARE MALE, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CCNTEXT

(CPS-55404A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		2C-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	30.8	7669	27.0	1736	32.2	1811	33.4	1606	30.9	1806	30.8	710
ALL PUBLIC SCHOOLS	33.3	6265	29.1	1518	34.9	1544	36.6	1280	32.8	1356	33.9	567
K1-5,K1-6	10.8	1961	11.5	509	11.2	447	10.6	332	10.1	507	10.2	166
K1-7,K1-8,K1-9	19.8	546	19.1	232	20.1	123	20.1	83	18.6	64	24.2	44
6-8,7-8,6-9,7-9,8-9	48.3	1114	48.9	167	49.2	259	48.9	285	47.2	303	47.3	100
7-12	52.7	311	52.3	87	53.3	95	53.9	66	51.7	39	49.7	24
9-12,10-12	55.7	1482	56.4	197	55.6	409	55.4	375	55.8	339	55.4	162
K1-12	36.5	337	36.3	190	38.4	82	33.3	37	41.9	13	31.7	15
OTHER	22.3	514	23.3	136	20.5	129	21.5	102	26.1	91	19.1	56
ALL NON-PUBLIC SCHOOLS	19.9	1388	11.9	212	16.5	262	20.8	323	25.5	448	18.8	143
ALL CATHOLIC SCHOOLS	16.5	1183	8.4	192	14.5	243	18.5	286	22.0	339	13.4	123
K1-5,K1-6,K1-7,K1-8,K1-9	3.1	695	3.7	150	3.1	144	3.1	143	3.2	181	2.4	77
9-12,10-12	43.9	335	36.5	24	40.8	62	40.6	101	49.5	118	45.3	30
OTHER	17.3	153	10.3	18	14.7	37	18.0	42	26.4	40	6.8	16
ALL NON-CATH.,CHURCH REL.	38.0	94	41.5	13	41.5	11	44.9	17	33.8	44	36.1	9
ALL NON-CATH.,NON-CHURCH REL.	41.5	90	56.2	4	38.8	6	35.1	14	39.4	59	65.9	7
UNKNOWN	40.0	21	50.0	3	62.5	2	28.0	6	25.5	6	61.2	4
TYPE OF CONTROL UNKNOWN	18.7	16	18.3	6	26.4	5	19.3	3	0.0	2	0.0	0

TABLE CC- 3. MEAN PERCENTAGE OF TEACHERS WITH AT LEAST A MASTERS DEGREE, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CCNTEXT

(CPS-55404E)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		20-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	24.6	7375	18.5	1680	23.1	1761	26.7	1554	29.6	1753	25.9	627
ALL PUBLIC SCHOOLS	25.4	6024	19.3	1468	23.7	1501	27.5	1238	31.3	1316	28.0	501
K1-5,K1-6	16.2	1910	14.1	497	14.5	440	16.5	323	19.3	494	17.2	156
K1-7,K1-8,K1-9	16.8	524	14.8	226	14.1	120	19.1	77	27.4	63	15.5	38
6-8,7-8,6-9,7-9,8-9	29.3	1053	28.3	155	26.1	247	28.4	271	32.9	292	31.1	88
7-12	28.5	302	24.4	84	26.5	91	29.2	66	42.6	39	25.1	22
9-12,10-12	41.3	1409	33.7	187	37.3	394	40.5	366	49.3	325	46.6	137
K1-12	19.5	332	16.8	188	20.4	82	22.6	36	45.1	14	17.2	12
OTHER	18.6	494	16.3	131	17.5	127	19.7	99	22.7	89	18.4	48
ALL NON-PUBLIC SCHOOLS	20.9	1335	13.3	206	19.6	255	23.7	313	24.3	435	17.6	126
ALL CATHOLIC SCHOOLS	19.9	1136	12.7	186	19.7	236	23.0	277	22.9	328	15.9	109
K1-5,K1-6,K1-7,K1-8,K1-9	8.7	665	8.4	147	9.3	138	11.2	136	8.0	176	5.3	68
9-12,10-12	41.6	324	36.3	23	39.1	61	40.4	101	45.7	113	38.9	26
OTHER	22.6	147	17.7	16	26.2	37	19.2	40	24.1	39	24.2	15
ALL NON-CATH.,CHURCH REL.	21.1	93	8.4	13	15.9	11	24.1	17	23.3	44	30.6	8
ALL NON-CATH.,NON-CHURCH REL.	31.9	86	43.5	4	20.7	6	36.2	13	31.7	57	27.8	6
UNKNOWN	31.8	20	32.7	3	27.5	2	27.8	6	41.2	6	23.3	3
TYPE OF CONTROL UNKNOWN	17.6	16	12.3	6	31.0	5	10.0	3	11.5	2	0.0	0

TABLE CC- 4. MEAN NUMBER OF PUPILS ENROLLED, BY TYPE OF SCHOCL AND SCHOOL-COMMUNITY SOCIAL CLASS CCNTEXT

(CPS-55405)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		2C-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	861	7663	656	1737	835	1810	951	1599	929	1807	1050	710
ALL PUBLIC SCHOOLS	913	6258	680	1518	873	1543	1018	1276	1027	1355	1134	566
K1-5,K1-6	600	1966	571	510	594	448	593	333	626	507	644	168
K1-7,K1-8,K1-9	596	547	489	232	597	125	707	83	759	64	711	43
6-8,7-8,6-9,7-9,8-9	977	1114	874	168	910	255	967	284	1046	304	1137	103
7-12	1064	312	798	87	9C8	96	1253	67	1540	38	1366	24
9-12,10-12	1482	1477	1045	198	1337	408	1519	374	1659	339	1942	158
K1-12	862	333	687	189	890	81	1506	36	1596	14	661	13
OTHER	609	509	559	134	540	130	632	99	722	89	664	57
ALL NON-PUBLIC SCHOOLS	629	1389	487	213	618	262	686	320	635	450	717	144
ALL CATHOLIC SCHOOLS	675	1188	506	193	642	243	726	284	712	345	778	123
K1-5,K1-6,K1-7,K1-8,K1-9	615	706	454	151	555	145	658	142	697	188	765	80
9-12,10-12	850	332	855	24	842	61	899	100	808	117	858	30
OTHER	565	150	484	18	652	37	545	42	506	40	679	13
ALL NON-CATH.,CHURCH REL.	245	92	152	13	183	11	276	17	267	42	286	9
ALL NON-CATH.,NON-CHURCH REL.	414	88	364	4	349	6	334	13	444	57	405	8
UNKNCWN	654	21	834	3	921	2	696	6	588	6	421	4
TYPE OF CONTROL UNKNOWN	543	16	574	6	447	5	564	3	654	2	0	0

TABLE CC- 5. MEAN PERCENTAGE OF PUPILS AT LEAST ONE YEAR BEHIND THEIR AGE GROUP, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

(CPS-55405E)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		2C-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	10.1	7248	15.3	1686	11.3	1767	8.4	1567	5.6	1760	9.5	468
ALL PUBLIC SCHOOLS	10.8	5955	16.0	1479	11.8	1518	8.9	1259	5.7	1328	10.2	371
K1-5,K1-6	10.7	1874	15.9	498	12.2	435	9.4	325	5.5	499	8.7	117
K1-7,K1-8,K1-9	12.7	525	16.8	227	12.3	124	9.4	82	5.4	61	7.5	31
6-8,7-8,6-9,7-9,8-9	10.4	1068	16.8	159	13.5	257	8.6	282	6.1	295	10.1	75
7-12	9.9	303	13.3	86	8.6	94	7.6	67	5.4	39	18.2	17
9-12,10-12	9.4	1392	13.6	195	10.9	404	8.4	368	5.5	331	11.5	94
K1-12	12.4	325	13.7	188	10.9	81	10.4	37	8.2	14	18.2	5
OTHER	13.5	468	22.6	126	12.6	123	10.2	98	6.7	89	9.7	32
ALL NON-PUBLIC SCHOOLS	6.9	1278	10.2	202	8.4	244	5.9	305	5.2	430	6.5	97
ALL CATHOLIC SCHOOLS	6.5	1088	10.4	183	7.7	226	5.5	269	4.6	328	5.4	82
K1-5,K1-6,K1-7,K1-8,K1-9	7.9	634	11.3	144	8.6	132	6.3	131	6.0	176	7.1	51
9-12,10-12	3.8	317	7.2	24	4.5	59	4.3	98	2.8	114	2.1	22
OTHER	6.3	137	6.8	15	9.9	35	5.7	40	3.8	38	4.4	9
ALL NON-CATH.,CHURCH REL.	7.1	87	5.2	13	10.0	11	5.5	17	8.2	39	3.7	7
ALL NON-CATH.,NON-CHURCH REL.	10.0	86	8.8	4	30.2	6	13.3	13	7.0	57	12.2	6
UNKNOWN	13.2	17	30.0	2	2.0	1	7.8	6	4.2	6	45.0	2
TYPE OF CONTROL UNKNOWN	11.5	15	9.6	5	12.2	5	17.3	3	5.5	2	0.0	0

TABLE CC- 6. MEAN PERCENTAGE OF PUPILS AT LEAST ONE YEAR BEHIND THEIR GRADE LEVEL IN READING, BY TYPE OF SCHOCL AND SCHOOL-COMMUNITY SOCIAL CLASS CCNTEXT

(CPS-55405F)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		2C-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	20.3	7215	29.2	1691	22.5	1764	17.9	1562	12.1	1748	19.1	450
ALL PUBLIC SCHOCLS	21.4	5923	30.3	1485	23.1	1510	18.7	1246	12.4	1320	20.2	362
K1-5,K1-6	18.8	1865	28.6	498	20.5	434	16.1	324	10.2	496	14.4	113
K1-7,K1-8,K1-9	22.9	525	30.2	228	19.4	123	17.1	82	12.4	62	19.2	30
6-8,7-8,6-9,7-9,8-9	23.0	1066	36.5	163	27.4	254	20.7	280	13.7	295	23.9	74
7-12	23.2	294	28.8	85	23.9	93	19.8	63	13.2	39	28.3	14
9-12,10-12	21.5	1380	30.0	195	24.7	400	20.1	363	14.1	327	21.9	95
K1-12	25.6	320	28.3	186	23.8	81	19.9	36	16.0	12	17.6	5
OTHER	22.0	473	33.0	130	20.8	125	16.1	98	13.0	89	24.8	31
ALL NON-PUBLIC SCHOOLS	15.4	1277	21.1	201	18.8	249	15.0	313	11.3	426	14.8	88
ALL CATHOLIC SCHOOLS	15.9	1087	21.2	182	18.5	230	15.1	277	12.1	324	14.5	74
K1-5,K1-6,K1-7,K1-8,K1-9	17.2	646	22.3	143	19.4	137	15.5	138	12.9	176	16.9	52
9-12,10-12	12.9	303	16.0	23	14.6	57	14.8	98	10.5	111	6.6	14
OTHER	16.3	138	19.0	16	21.4	36	14.8	41	12.5	37	13.0	8
ALL NON-CATH.,CHURCH REL.	11.8	87	20.0	13	19.0	11	9.5	17	8.9	40	6.7	6
ALL NON-CATH.,NON-CHURCH REL.	12.3	84	5.0	4	30.3	6	17.5	13	8.9	56	21.0	5
UNKNOWN	18.4	19	50.0	2	15.0	2	16.3	6	6.8	6	27.0	3
TYPE OF CONTROL UNKNOWN	22.1	15	27.0	5	17.2	5	26.7	3	15.5	2	0.0	0

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TABLE CC- 7. MEAN PERCENTAGE OF NEGRO PUPILS,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		2C-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	10.0	7496	22.2	1730	8.6	1799	5.5	1594	2.9	1786	12.2	587
ALL PUBLIC SCHOOLS	11.4	6111	24.1	1512	9.5	1535	6.4	1273	3.0	1336	14.6	455
K1-5,K1-6	11.7	1910	25.1	506	10.4	443	6.5	330	3.0	499	11.1	132
K1-7,K1-8,K1-9	14.2	533	22.4	230	9.3	123	8.1	82	2.8	64	12.0	34
6-8,7-8,6-9,7-9,8-9	11.2	1087	31.9	166	10.0	257	6.6	286	2.9	297	18.9	81
7-12	13.6	296	27.0	87	9.3	94	6.5	66	4.4	36	16.8	13
9-12,10-12	8.9	1452	18.4	196	10.1	408	6.6	372	3.0	337	12.2	139
K1-12	12.9	330	17.9	191	4.7	80	3.6	36	1.6	14	36.7	9
OTHER	13.2	503	29.1	136	7.0	130	4.8	101	3.1	89	21.0	47
ALL NON-PUBLIC SCHOOLS	3.7	1370	8.8	212	3.8	260	2.1	318	2.4	448	4.0	132
ALL CATHOLIC SCHOOLS	3.5	1168	8.1	193	3.6	241	1.8	282	2.3	339	3.5	113
K1-5,K1-6,K1-7,K1-8,K1-9	4.3	687	8.0	151	4.8	143	1.8	141	2.6	181	4.4	71
9-12,10-12	2.7	332	9.0	24	2.5	61	2.2	101	2.0	118	2.7	28
OTHER	1.8	149	8.3	18	.6	37	.8	40	1.5	40	.3	14
ALL NON-CATH.,CHURCH REL.	5.4	91	16.9	12	10.2	11	2.3	16	2.7	44	2.3	8
ALL NON-CATH.,NON-CHURCH REL.	2.7	91	1.0	4	.3	6	.6	14	2.9	59	7.5	8
UNKNOWN	13.6	20	33.3	3	0.0	2	17.8	6	.5	6	21.0	3
TYPE OF CONTROL UNKNOWN	1.7	15	1.3	6	.3	4	5.3	3	0.0	2	0.0	0

(CPS-55405P)

TABLE CC- 8. MEAN PERCENTAGE OF PUPILS WHOSE FATHERS ARE WHITE COLLAR WORKERS, BY TYPE OF SCHOCL AND SCHOOL-COMMUNITY SOCIAL CLASS CCNTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS) 00-19 WC		2C-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	38.5	7012	8.7	1750	25.0	1821	44.4	1618	75.5	1823	0.0	0
ALL PUBLIC SCHOOLS	36.6	5737	8.6	1529	24.9	1553	44.2	1290	74.1	1365	0.0	0
K1-5,K1-6	38.4	1808	8.3	513	24.8	449	44.7	336	76.4	510	0.0	0
K1-7,K1-8,K1-9	26.7	506	7.5	233	24.8	126	44.7	83	77.0	64	0.0	0
6-8,7-8,6-9,7-9,8-9	42.2	1021	9.6	168	25.2	259	44.2	288	72.5	306	0.0	0
7-12	30.7	290	9.4	88	25.1	96	42.9	67	71.9	39	0.0	0
9-12,10-12	40.3	1326	10.2	198	25.2	411	44.0	377	71.9	340	0.0	0
K1-12	18.6	324	7.7	191	24.4	82	42.2	37	70.6	14	0.0	0
OTHER	34.3	462	8.8	138	24.9	130	44.4	102	74.6	92	0.0	0
ALL NON-PUBLIC SCHOOLS	47.4	1259	8.9	215	25.4	263	45.4	325	79.6	456	0.0	0
ALL CATHOLIC SCHOOLS	44.5	1074	9.0	195	25.5	244	45.4	288	77.0	347	0.0	0
K1-5,K1-6,K1-7,K1-8,K1-9	41.4	630	8.4	153	24.8	145	45.9	144	77.7	188	0.0	0
9-12,10-12	50.3	307	11.4	24	26.5	62	44.7	102	75.4	119	0.0	0
OTHER	45.4	137	10.7	18	26.2	37	45.9	42	78.4	40	0.0	0
ALL NCN-CATH.,CHURCH REL.	57.9	85	8.1	13	24.2	11	46.4	17	85.5	44	0.0	0
ALL NCN-CATH.,NON-CHURCH REL.	73.0	83	6.0	4	24.0	6	44.1	1[illegible]	89.4	59	0.0	0
UNKNCWN	51.4	17	7.7	3	27.5	2	45.0	6	87.5	6	0.0	0
TYPE OF CONTROL UNKNOWN	30.2	16	11.0	6	25.4	5	45.0	3	77.5	2	0.0	0

TABLE CC- 9. MEAN SCHOOL IQ,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CCNTEXT

(CPS-554011)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		2C-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	103.0	6671	97.2	1526	101.3	1614	103.9	1441	109.4	1672	102.5	418
ALL PUBLIC SCHOOLS	102.2	5464	96.8	1337	100.7	1388	103.3	1159	108.7	1258	102.0	322
K1-5,K1-6	102.5	1710	96.5	448	101.1	401	104.0	298	108.7	471	101.6	92
K1-7,K1-8,K1-9	99.3	457	95.7	194	98.8	111	100.9	73	108.9	56	104.6	23
6-8,7-8,6-9,7-9,8-9	103.6	989	95.5	146	100.7	238	104.3	263	109.7	280	102.5	62
7-12	101.8	282	96.9	82	101.7	85	104.3	60	110.0	39	97.4	16
9-12,10-12	102.8	1311	98.7	187	100.7	367	102.5	346	107.9	314	103.0	97
K1-12	100.7	301	99.3	169	101.7	77	[illegible]1	36	108.2	14	94.6	5
OTHER	100.6	414	94.2	111	99.4	109	102.7	83	108.2	84	101.1	27
ALL NON-PUBLIC SCHOOLS	106.8	1194	100.4	184	105.2	222	106.3	280	111.4	412	103.9	96
ALL CATHOLIC SCHOOLS	106.0	1021	99.9	166	105.1	207	106.2	250	110.0	315	103.9	83
K1-5,K1-6,K1-7,K1-8,K1-9	104.6	581	99.4	127	103.4	119	106.7	121	108.1	165	103.5	49
9-12,10-12	108.6	305	105.5	22	108.4	56	105.5	93	112.9	111	104.0	23
OTHER	106.0	135	96.7	17	106.0	32	106.1	36	110.0	39	105.7	11
ALL NON-CATH.,CHURCH REL.	110.8	76	102.5	12	107.8	9	107.9	12	114.9	38	112.0	5
ALL NON-CATH.,NON-CHURCH REL.	113.6	79	116.0	4	103.2	4	109.2	12	116.6	54	98.4	5
UNKNOWN	106.1	18	102.5	2	102.5	2	102.7	6	117.4	5	98.7	3
TYPE OF CONTROL UNKNOWN	105.0	13	102.6	5	108.0	4	100.0	2	110.0	2	0.0	0

TABLE CC- 10. PROPORTION OF SCHOOLS WITH A CENTRALIZED SCHOOL LIBRARY, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

(CPS-554013A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		20-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N
ALL SCHOOLS	.836	7724	.758	1745	.833	1814	.868	1615	.888	1821	.826	729
ALL PUBLIC SCHOOLS	.847	6299	.766	1524	.844	1548	.889	1287	.899	1364	.856	576
K1-5,K1-6	.725	1968	.665	511	.700	447	.763	334	.786	509	.713	167
K1-7,K1-8,K1-9	.685	550	.628	231	.659	126	.699	83	.859	64	.783	46
6-8,7-8,6-9,7-9,8-9	.975	1123	.952	168	.957	257	.983	288	.990	306	.990	104
7-12	.975	314	.943	88	1.000	96	1.000	67	1.000	39	.875	24
9-12,10-12	.990	1491	.975	198	.985	411	.995	377	1.000	340	.988	165
K1-12	.916	335	.890	191	.939	82	.944	36	1.000	14	1.000	12
OTHER	.672	518	.555	137	.667	129	.706	102	.815	92	.672	58
ALL NON-PUBLIC SCHOOLS	.783	1410	.698	215	.766	261	.785	325	.855	456	.712	153
ALL CATHOLIC SCHOOLS	.777	1204	.703	195	.769	242	.774	288	.856	347	.697	132
K1-5,K1-6,K1-7,K1-8,K1-9	.654	711	.634	153	.657	143	.590	144	.750	188	.578	83
9-12,10-12	.994	340	1.000	24	.984	62	1.000	102	1.000	119	.970	33
OTHER	.863	153	.889	18	.838	37	.857	42	.925	40	.750	16
ALL NON-CATH.,CHURCH REL.	.755	94	.538	13	.636	11	.882	17	.773	44	.889	9
ALL NON-CATH.,NON-CHURCH REL.	.857	91	.750	4	.833	6	.786	14	.915	59	.625	8
UNKNOWN	.952	21	1.000	3	1.000	2	1.000	6	.833	6	1.000	4
TYPE OF CONTROL UNKNOWN	.933	15	.833	6	1.000	5	1.000	3	1.000	1	0.000	0

TABLE CC- 11. PROPORTION OF SCHOOLS HAVING A SHOP WITH POWER TOOLS, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

(CPS-554014)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		20-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N
ALL SCHOOLS	.467	7682	.410	1734	.497	1809	.527	1607	.436	1811	.479	721
ALL PUBLIC SCHOOLS	.554	6264	.458	1516	.568	1542	.640	1280	.556	1356	.574	570
K1-5,K1-6	.017	1958	.018	507	.022	446	.015	331	.016	507	.006	167
K1-7,K1-8,K1-9	.338	547	.233	232	.350	123	.434	83	.531	64	.400	45
6-8,7-8,6-9,7-9,8-9	.930	1117	.857	1[illegible]	.876	258	.972	286	.960	303	.980	102
7-12	.961	310	.920	87	.979	95	1.000	66	1.000	39	.870	23
9-12,10-12	.970	1484	.974	196	.958	409	.971	376	.979	339	.970	164
K1-12	.913	334	.895	191	.926	81	.972	36	.929	14	.917	12
OTHER	.333	514	.333	135	.285	130	.333	102	.411	90	.316	57
ALL NON-PUBLIC SCHOOLS	.081	1402	.066	212	.080	262	.080	324	.075	453	.119	151
ALL CATHOLIC SCHOOLS	.046	1195	.036	192	.058	243	.059	287	.029	344	.054	129
K1-5,K1-6,K1-7,K1-8,K1-9	.011	706	.007	152	.007	144	.014	143	.005	187	.037	80
9-12,10-12	.115	339	.208	24	.161	62	.127	102	.068	118	.091	33
OTHER	.053	150	.063	16	.081	37	.048	42	.026	39	.063	16
ALL NON-CATH.,CHURCH REL.	.160	94	.154	13	.273	11	.118	17	.114	44	.333	9
ALL NON-CATH.,NON-CHURCH REL.	.326	92	.500	4	.333	6	.286	14	.288	59	.556	9
UNKNOWN	.619	21	1.000	3	1.000	2	.500	6	.333	6	.750	4
TYPE OF CONTROL UNKNOWN	.500	16	.500	6	.400	5	.667	3	.500	2	0.000	0

TABLE CC- 12. MEAN EMPHASIS ON TYPING INSTRUCTION SCORE, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

(CPS-554015)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		20-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	1.054	7704	0.955	1739	1.107	1814	1.145	1611	1.004	1816	1.080	724
ALL PUBLIC SCHOOLS	1.094	6285	0.998	1520	1.144	1547	1.169	1285	1.063	1360	1.122	573
K1-5,K1-6	0.438	1961	0.416	510	0.469	446	0.434	332	0.425	506	0.467	167
K1-7,K1-8,K1-9	0.495	550	0.494	233	0.460	124	0.494	83	0.516	64	0.565	46
6-8,7-8,6-9,7-9,8-9	1.017	1124	0.982	167	0.958	259	1.014	288	1.075	306	1.058	104
7-12	1.962	312	1.943	88	1.969	96	2.000	66	2.000	39	1.826	23
9-12,10-12	1.968	1490	1.944	198	1.968	410	1.968	377	1.991	340	1.945	165
K1-12	1.883	334	1.862	189	1.902	82	1.892	37	2.000	14	1.917	12
OTHER	0.839	514	0.874	135	0.752	130	0.794	102	0.945	91	0.768	56
ALL NON-PUBLIC SCHOOLS	0.874	1403	0.643	213	0.893	262	1.050	323	0.830	454	0.921	151
ALL CATHOLIC SCHOOLS	0.880	1198	0.632	193	0.865	243	1.045	286	0.867	346	0.908	130
K1-5,K1-6,K1-7,K1-8,K1-9	0.368	707	0.373	153	0.326	144	0.408	142	0.305	187	0.506	81
9-12,10-12	1.826	340	2.000	24	1.903	67	1.931	102	1.672	119	1.788	33
OTHER	1.146	151	1.063	16	1.351	37	1.048	42	1.100	40	1.125	16
ALL NON-CATH.,CHURCH REL.	0.717	92	0.692	13	0.818	11	0.588	17	0.721	43	0.875	8
ALL NON-CATH.,NON-CHURCH REL.	0.826	92	0.000	4	1.000	6	1.429	14	0.712	59	0.889	9
UNKNOWN	1.429	21	2.000	3	2.000	2	1.667	6	0.667	6	1.500	4
TYPE OF CONTROL UNKNOWN	1.000	16	1.167	6	1.200	5	1.000	3	0.000	2	0.000	0

TABLE CC- 13. MEAN PERCENTAGE OF 12TH GRADE GRADUATES GOING TO FOUR-YEAR COLLEGES, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

(CPS-554019A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		20-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	36.1	2617	24.8	533	29.4	686	35.2	599	55.0	588	36.3	211
ALL PUBLIC SCHOOLS	32.3	2136	23.9	492	27.6	602	33.3	471	48.2	400	33.2	171
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	32.0	304	27.1	85	28.0	95	31.7	66	49.8	37	39.4	21
9-12,10-12	33.5	1415	21.6	192	27.3	401	33.6	355	47.7	331	33.6	136
K1-12	28.0	327	25.2	188	28.3	82	34.3	35	51.3	14	23.4	8
OTHER	30.9	90	20.6	27	29.7	24	32.0	15	51.6	18	17.5	6
ALL NON-PUBLIC SCHOOLS	53.3	477	36.8	39	42.8	83	42.3	127	69.6	188	49.2	40
ALL CATHOLIC SCHOOLS	50.3	383	37.2	32	42.7	76	41.6	110	65.3	132	49.8	33
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	51.9	315	42.2	23	44.4	60	42.0	93	65.9	113	52.3	26
OTHER	43.0	68	24.4	9	36.1	16	39.2	17	61.9	19	40.4	7
ALL NON-CATH.,CHURCH REL.	63.5	27	6.5	2	74.0	2	45.2	5	77.1	15	57.0	3
ALL NON-CATH.,NON-CHURCH REL.	70.1	55	87.5	2	32.0	3	46.2	9	79.9	38	43.3	3
UNKNOWN	47.8	12	19.3	3	33.5	2	51.7	3	89.7	3	25.0	1
TYPE OF CONTROL UNKNOWN	13.0	4	15.0	2	0.0	1	22.0	1	0.0	0	0.0	0

TABLE CC- 14. MEAN PERCENTAGE OF MALE FORMER 10TH GRADERS WHO DROPPED OUT, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CCNTEXT

(CPS-554020A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		2C-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	9.0	2348	11.5	505	10.0	634	8.5	543	5.2	511	10.8	155
ALL PUBLIC SCHOOLS	9.6	2019	11.8	473	10.6	575	9.3	456	5.3	384	11.4	131
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	8.3	287	12.1	81	6.9	89	8.3	65	4.0	37	6.8	15
9-12,10-12	10.0	1334	13.0	180	12.2	384	9.6	344	5.6	318	11.4	108
K1-12	9.3	320	10.2	184	7.4	81	8.0	35	3.7	13	22.3	7
OTHER	9.9	78	14.0	28	9.1	21	9.9	12	3.8	16	10.0	1
ALL NON-PUBLIC SCHOOLS	4.7	325	4.4	30	4.6	58	4.4	86	4.6	127	7.3	24
ALL CATHOLIC SCHOOLS	4.2	251	3.7	24	4.1	50	4.2	73	3.8	86	7.8	18
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	4.4	202	4.5	15	3.4	39	4.3	60	3.9	74	9.6	14
OTHER	3.7	49	2.2	9	6.5	11	3.5	13	3.3	12	1.5	4
ALL NON-CATH.,CHURCH REL.	6.6	24	6.0	2	4.3	3	5.6	5	5.9	12	13.0	2
ALL NON-CATH.,NON-CHURCH REL.	6.3	40	0.0	1	11.7	3	6.0	6	6.5	28	0.0	2
UNKNCWN	6.1	10	11.0	3	3.5	2	5.5	2	0.0	1	5.0	2
TYPE OF CONTROL UNKNOWN	13.7	4	25.0	2	0.0	1	5.0	1	0.0	0	0.0	0

(CPS-554020B)

TABLE CC- 15. MEAN PERCENTAGE OF FEMALE FORMER 10TH GRADERS WHO DROPPED OUT, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS) 00-19 WC		20-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	7.5	2333	9.8	501	8.8	637	7.0	544	3.7	498	8.4	153
ALL PUBLIC SCHOOLS	8.2	1999	10.2	467	9.4	574	7.9	450	4.0	383	9.4	125
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	7.0	284	9.7	79	6.3	89	7.5	64	2.6	37	5.4	15
9-12,10-12	8.4	1320	10.8	177	10.7	384	8.1	339	4.3	317	9.5	103
K1-12	8.3	317	9.5	183	6.6	80	6.6	35	2.1	13	17.7	6
OTHER	9.3	78	13.1	28	9.5	21	7.7	12	3.5	16	10.0	1
ALL NON-PUBLIC SCHOOLS	3.2	330	3.7	32	3.6	62	2.9	93	2.8	115	4.2	28
ALL CATHOLIC SCHOOLS	2.7	256	3.3	26	3.3	55	2.8	79	1.6	73	3.8	23
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	2.7	207	3.4	17	3.2	40	2.9	70	1.5	62	4.4	18
OTHER	2.6	49	3.0	9	3.5	15	1.6	9	2.4	11	1.6	5
ALL NON-CATH.,CHURCH REL.	4.1	24	6.0	2	7.5	2	4.2	5	2.3	13	10.0	2
ALL NON-CATH.,NON-CHURCH REL.	5.4	39	0.0	1	7.0	3	3.5	6	6.0	28	0.0	1
UNKNOWN	4.6	11	7.0	3	3.5	2	4.3	3	0.0	1	5.0	2
TYPE OF CONTROL UNKNOWN	11.0	4	21.0	2	0.0	1	2.0	1	0.0	0	0.0	0

TABLE CC- 16. MEAN PERCENT OF FORMER 10TH GRADE ENROLLEES GOING TO ANY FORM OF HIGHER ED., BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY SOCIAL CLASS CONTEXT **** (PERCENT OF FATHERS IN WHITE COLLAR OCCUPATIONS)									
			00-19 WC		20-34 WC		35-59 WC		60-100 WC		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	55.9	2101	42.6	380	50.5	570	56.3	523	71.9	478	58.1	150
ALL PUBLIC SCHOOLS	52.9	1777	41.3	351	48.6	508	53.8	427	68.2	364	55.7	127
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	51.1	251	41.7	68	49.2	76	51.7	60	71.8	31	58.4	16
9-12,10-12	54.0	1245	41.0	160	47.7	349	54.0	326	67.7	304	55.6	106
K1-12	49.5	212	42.7	105	53.1	62	56.9	31	69.6	12	54.0	2
OTHER	50.2	69	35.4	18	48.0	21	49.9	10	69.1	17	48.0	3
ALL NON-PUBLIC SCHOOLS	72.5	322	58.0	28	66.2	62	67.3	95	84.0	114	71.0	23
ALL CATHOLIC SCHOOLS	72.7	279	56.9	23	66.3	55	67.5	84	84.6	97	73.1	20
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	74.2	241	58.0	19	69.3	46	68.7	71	84.0	89	77.7	16
OTHER	63.2	38	51.7	4	51.0	9	60.9	13	90.5	8	54.7	4
ALL NON-CATH.,CHURCH REL.	76.7	15	58.5	2	82.5	2	72.0	4	90.6	5	63.5	2
ALL NON-CATH.,NON-CHURCH REL.	71.2	20	100.0	1	66.3	3	52.5	4	76.3	12	0.0	0
UNKNOWN	58.4	8	49.0	2	48.5	2	76.3	3	0.0	0	43.0	1
TYPE OF CONTROL UNKNOWN	62.0	2	35.0	1	0.0	0	89.0	1	0.0	0	0.0	0

TABLE CD- 1. MEAN NUMBER OF FULL-TIME TEACHERS,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-55404)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	36.7	7613	40.4	380	50.3	1432	41.7	2401	26.1	3156	39.0	244
ALL PUBLIC SCHOOLS	40.3	6209	41.7	361	53.2	1283	45.1	1942	29.0	2421	43.5	202
K1-5,K1-6	21.2	1951	28.2	108	26.4	369	21.0	489	18.3	920	21.4	65
K1-7,K1-8,K1-9	22.7	540	22.8	54	31.9	70	27.3	133	17.9	265	24.9	18
6-8,7-8,6-9,7-9,8-9	44.9	1102	64.5	54	51.2	274	44.0	410	36.4	327	53.2	37
7-12	51.9	308	51.4	28	57.4	58	60.5	87	39.5	117	73.0	18
9-12,10-12	71.8	1461	75.3	43	89.6	380	70.4	616	55.4	385	76.8	37
K1-12	39.3	333	38.8	36	47.8	27	51.0	66	34.5	195	34.7	9
OTHER	25.4	514	32.6	38	34.5	105	25.8	141	19.1	212	28.4	18
ALL NON-PUBLIC SCHOOLS	20.9	1388	14.0	19	25.0	147	27.1	454	16.5	727	17.6	41
ALL CATHOLIC SCHOOLS	20.5	1185	9.5	13	24.8	126	26.5	398	16.1	614	18.2	34
K1-5,K1-6,K1-7,K1-8,K1-9	14.3	701	9.7	11	13.1	68	14.4	182	14.5	416	15.4	24
9-12,10-12	35.0	333	4.0	1	39.4	51	40.0	181	23.7	94	30.0	6
OTHER	17.4	151	12.0	1	32.3	7	20.2	35	15.5	104	17.5	4
ALL NON-CATH.,CHURCH REL.	14.9	95	6.0	3	8.1	10	24.9	20	13.7	58	6.5	4
ALL NON-CATH.,NON-CHURCH REL.	29.3	89	27.0	1	44.9	10	35.7	30	21.6	46	34.5	2
UNKNOWN	31.5	19	49.0	2	12.0	1	30.7	6	32.8	9	9.0	1
TYPE OF CONTROL UNKNOWN	23.2	16	0.0	0	43.5	2	28.4	5	15.0	8	23.0	1

(CPS-55404A)

TABLE CD- 2. MEAN PERCENTAGE OF TEACHERS WHO ARE MALE,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	30.8	7669	25.1	384	34.7	1456	34.7	2419	26.8	3187	31.4	223
ALL PUBLIC SCHOOLS	33.3	6265	26.0	364	36.0	1306	36.8	1957	30.1	2448	32.8	190
K1-5,K1-6	10.8	1961	11.1	108	11.2	373	10.6	494	10.8	927	9.3	59
K1-7,K1-8,K1-9	19.8	546	15.2	56	23.3	72	19.0	133	20.3	269	20.2	16
6-8,7-8,6-9,7-9,8-9	48.3	1114	43.7	54	48.0	281	47.8	412	50.4	333	45.1	34
7-12	52.7	311	46.4	27	51.4	58	52.6	88	54.4	120	54.8	18
9-12,10-12	55.7	1482	43.0	43	54.3	386	55.7	622	58.4	392	55.8	39
K1-12	36.5	337	28.0	38	27.7	29	37.8	66	39.1	195	34.6	9
OTHER	22.3	514	22.9	38	26.9	107	20.2	142	21.1	212	23.7	15
ALL NON-PUBLIC SCHOOLS	19.9	1388	9.3	20	24.1	148	25.7	457	15.7	731	23.2	32
ALL CATHOLIC SCHOOLS	16.5	1183	1.2	14	20.9	127	23.1	399	11.7	616	16.3	27
K1-5,K1-6,K1-7,K1-8,K1-9	3.1	695	.8	12	2.1	67	2.0	182	3.9	417	3.9	17
9-12,10-12	43.9	335	0.0	1	43.6	52	44.5	181	42.7	95	54.5	6
OTHER	17.3	153	8.0	1	30.7	8	22.2	36	14.9	104	11.7	4
ALL NON-CATH.,CHURCH REL.	38.0	94	34.0	3	28.7	10	42.4	20	38.1	58	40.7	3
ALL NON-CATH.,NON-CHURCH REL.	41.5	90	29.0	1	53.2	10	45.7	30	35.4	48	100.0	1
UNKNOWN	40.0	21	19.5	2	100.0	1	36.7	8	36.4	9	80.0	1
TYPE OF CONTROL UNKNOWN	18.7	16	0.0	0	30.0	2	30.0	5	9.1	8	17.0	1

TABLE CD- 3. MEAN PERCENTAGE OF TEACHERS WITH AT LEAST A MASTERS DEGREE,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-55404E)

			**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	24.6	7375	23.3	362	29.4	1387	27.6	2340	20.3	3087	24.3	199
ALL PUBLIC SCHOOLS	25.4	6024	23.8	343	29.9	1244	28.0	1888	21.3	2379	24.1	170
K1-5,K1-6	16.2	1910	19.6	106	18.9	363	16.0	482	14.9	902	14.0	57
K1-7,K1-8,K1-9	16.8	524	21.6	54	21.1	62	16.5	126	15.2	267	12.7	15
6-8,7-8,6-9,7-9,8-9	29.3	1053	27.3	49	30.0	261	29.4	399	28.4	314	33.6	30
7-12	28.5	302	26.4	24	31.5	57	29.7	87	26.9	119	25.2	15
9-12,10-12	41.3	1409	41.5	40	45.1	369	41.3	592	37.4	376	42.2	32
K1-12	19.5	332	14.6	36	22.9	28	24.6	66	18.3	194	18.0	8
OTHER	18.6	494	22.3	34	20.6	104	20.0	136	16.2	207	17.3	13
ALL NON-PUBLIC SCHOOLS	20.9	1335	15.2	19	25.3	141	26.0	447	16.8	700	26.1	28
ALL CATHOLIC SCHOOLS	19.9	1136	11.6	13	25.3	122	24.9	389	15.4	588	27.5	24
K1-5,K1-6,K1-7,K1-8,K1-9	8.7	665	7.7	11	11.5	64	8.7	178	8.1	397	14.7	15
9-12,10-12	41.6	324	50.0	1	42.9	50	41.3	176	41.0	91	47.2	6
OTHER	22.6	147	16.0	1	25.6	8	24.8	35	20.8	100	52.0	3
ALL NON-CATH.,CHURCH REL.	21.1	93	7.7	3	18.9	10	29.4	20	19.2	57	22.3	3
ALL NON-CATH.,NON-CHURCH REL.	31.9	86	85.0	1	37.2	8	32.9	30	29.8	46	6.0	1
UNKNOWN	31.8	20	14.5	2	0.0	1	47.1	8	25.7	9	0.0	0
TYPE OF CONTROL UNKNOWN	17.6	16	0.0	0	17.5	2	17.0	5	19.2	8	8.0	1

(CPS-55405)

TABLE CD- 4. MEAN NUMBER OF PUPILS ENROLLED,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	861	7663	971	381	1106	1441	956	2426	656	3184	974	231
ALL PUBLIC SCHOOLS	913	6258	1002	361	1155	1292	1007	1963	688	2447	1026	195
K1-5,K1-6	600	1966	822	108	712	371	595	496	529	926	654	65
K1-7,K1-8,K1-9	596	547	658	56	790	71	691	134	480	269	665	17
6-8,7-8,6-9,7-9,8-9	977	1114	1311	54	1072	278	967	412	833	333	1187	37
7-12	1064	312	1122	28	1160	56	1207	89	801	121	1735	18
9-12,10-12	1482	1477	1629	42	1831	383	1467	625	1143	391	1557	36
K1-12	862	333	967	35	883	28	1198	66	736	197	626	7
OTHER	609	509	830	38	790	105	620	141	463	210	711	15
ALL NON-PUBLIC SCHOOLS	629	1389	416	20	682	147	741	458	551	729	695	35
ALL CATHOLIC SCHOOLS	675	1188	369	14	748	125	788	401	590	618	747	30
K1-5,K1-6,K1-7,K1-8,K1-9	615	706	394	12	534	66	625	185	622	419	763	24
9-12,10-12	850	332	113	1	1004	51	991	180	516	96	697	4
OTHER	565	150	325	1	886	8	610	36	525	103	659	2
ALL NON-CATH.,CHURCH REL.	245	92	98	3	177	10	285	20	253	56	190	3
ALL NON-CATH.,NON-CHURCH REL.	414	88	535	1	436	11	439	29	373	46	1183	1
UNKNOWN	654	21	1162	2	142	1	614	8	689	9	146	1
TYPE OF CONTROL UNKNOWN	543	16	0	0	861	2	618	5	401	8	659	1

TABLE CD- 5. MEAN PERCENTAGE OF PUPILS AT LEAST ONE YEAR BEHIND THEIR AGE GROUP, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT (CPS-55405E)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	10.1	7248	24.2	358	14.2	1374	8.3	2321	7.9	3035	10.4	160
ALL PUBLIC SCHOOLS	10.8	5955	24.6	338	14.7	1232	8.8	1885	8.4	2362	10.9	138
K1-5,K1-6	10.7	1874	24.5	99	15.1	360	9.2	479	8.1	889	10.5	47
K1-7,K1-8,K1-9	12.7	525	27.8	55	16.6	69	9.2	128	10.4	260	9.5	13
6-8,7-8,6-9,7-9,8-9	10.4	1068	26.3	49	14.0	268	8.4	402	7.6	326	9.4	23
7-12	9.9	303	20.6	28	11.7	55	7.5	88	7.6	117	14.8	15
9-12,10-12	9.4	1392	21.6	39	12.7	358	8.0	596	7.0	373	12.2	26
K1-12	12.4	325	22.9	37	18.2	27	14.3	63	9.1	194	8.3	4
OTHER	13.5	468	26.2	31	22.4	95	9.3	129	10.2	203	9.7	10
ALL NON-PUBLIC SCHOOLS	6.9	1278	17.0	20	9.9	140	6.3	431	6.3	666	6.6	21
ALL CATHOLIC SCHOOLS	6.5	1088	17.8	14	9.5	122	5.9	377	5.9	557	7.4	18
K1-5,K1-6,K1-7,K1-8,K1-9	7.9	634	18.7	12	11.3	64	8.0	172	6.9	372	8.6	14
9-12,10-12	3.8	317	20.0	1	5.8	50	3.7	173	2.8	91	2.5	2
OTHER	6.3	137	5.0	1	17.9	8	6.4	32	5.4	94	4.5	2
ALL NON-CATH.,CHURCH REL.	7.1	87	13.3	3	4.7	9	4.3	18	8.2	55	2.0	2
ALL NON-CATH.,NON-CHURCH REL.	10.0	86	1.0	1	13.0	8	12.1	29	8.6	47	0.0	1
UNKNOWN	13.2	17	25.5	2	80.0	1	8.1	7	5.1	7	0.0	0
TYPE OF CONTROL UNKNOWN	11.5	15	0.0	0	17.5	2	5.6	5	12.7	7	20.0	1

TABLE CD- 6. MEAN PERCENTAGE OF PUPILS AT LEAST ONE YEAR BEHIND THEIR GRADE LEVEL IN READING, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-55405F)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	20.3	7215	48.3	358	27.3	1368	17.2	2300	16.3	3032	18.9	157
ALL PUBLIC SCHOOLS	21.4	5923	48.3	338	27.9	1230	18.1	1870	16.8	2349	19.7	136
K1-5,K1-6	18.8	1865	44.2	100	28.0	354	15.3	479	14.3	886	16.0	46
K1-7,K1-8,K1-9	22.9	525	49.3	55	27.7	68	17.9	128	18.6	261	22.3	13
6-8,7-8,6-9,7-9,8-9	23.0	1066	50.3	51	30.4	271	18.6	400	17.9	320	22.0	24
7-12	23.2	294	51.9	27	24.8	54	19.3	85	18.5	115	24.3	13
9-12,10-12	21.5	1380	51.1	36	26.0	361	18.9	587	18.2	370	22.1	26
K1-12	25.6	320	51.7	37	26.8	26	26.0	61	20.4	192	16.7	4
OTHER	22.0	473	46.4	32	29.3	96	18.2	130	17.4	205	17.2	10
ALL NON-PUBLIC SCHOOLS	15.4	1277	47.4	20	21.5	136	13.7	425	14.4	676	13.8	20
ALL CATHOLIC SCHOOLS	15.9	1087	41.4	14	22.4	118	14.3	370	15.0	567	13.9	18
K1-5,K1-6,K1-7,K1-8,K1-9	17.2	646	42.5	12	26.3	64	16.5	172	15.4	384	14.1	14
9-12,10-12	12.9	303	30.0	1	16.1	46	12.2	166	12.3	88	15.0	2
OTHER	16.3	138	40.0	1	28.0	8	14.4	32	15.8	95	12.0	2
ALL NON-CATH.,CHURCH REL.	11.8	87	58.3	3	7.8	9	6.2	19	11.9	54	13.0	2
ALL NON-CATH.,NON-CHURCH REL.	12.3	84	75.0	1	16.9	8	11.4	28	10.7	47	0.0	0
UNKNOWN	18.4	19	59.0	2	75.0	1	9.0	8	10.6	8	0.0	0
TYPE OF CONTROL UNKNOWN	22.1	15	0.0	0	47.5	2	14.4	5	21.4	7	15.0	1

TABLE CD- 7. MEAN PERCENTAGE OF NEGRO PUPILS, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-554051)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) **** 96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	10.0	7496	99.5	386	22.5	1461	1.5	2443	0.0	3206	0.0	0
ALL PUBLIC SCHOOLS	11.4	6111	99.5	366	23.3	1309	1.5	1974	0.0	2462	0.0	0
K1-5,K1-6	11.7	1910	99.3	108	29.2	375	1.4	496	0.0	931	0.0	0
K1-7,K1-8,K1-9	14.2	533	99.7	56	24.3	72	1.6	136	0.0	269	0.0	0
6-8,7-8,6-9,7-9,8-9	11.2	1087	99.1	54	21.9	281	1.5	416	0.0	336	0.0	0
7-12	13.6	296	99.5	28	19.3	58	1.4	89	0.0	121	0.0	0
9-12,10-12	8.9	1452	99.4	43	19.8	386	1.6	629	0.0	394	0.0	0
K1-12	12.9	330	100.0	38	12.8	29	1.5	66	0.0	197	0.0	0
OTHER	13.2	503	99.8	39	23.1	108	1.6	142	0.0	214	0.0	0
ALL NON-PUBLIC SCHOOLS	3.7	1370	99.5	20	16.1	150	1.5	464	0.0	736	0.0	0
ALL CATHOLIC SCHOOLS	3.5	1168	99.4	14	16.3	128	1.5	405	0.0	621	0.0	0
K1-5,K1-6,K1-7,K1-8,K1-9	4.3	687	99.3	12	21.5	68	1.5	186	0.0	421	0.0	0
9-12,10-12	2.7	332	100.0	1	10.0	52	1.6	183	0.0	96	0.0	0
OTHER	1.8	149	100.0	1	13.7	8	1.6	36	0.0	104	0.0	0
ALL NON-CATH.,CHURCH REL.	5.4	91	100.0	3	15.9	10	1.5	20	0.0	58	0.0	0
ALL NON-CATH.,NON-CHURCH REL.	2.7	91	100.0	1	9.2	11	1.5	31	0.0	48	0.0	0
UNKNOWN	13.6	20	99.0	2	60.0	1	1.9	8	0.0	9	0.0	0
TYPE OF CONTROL UNKNOWN	1.7	15	0.0	0	10.0	2	1.0	5	0.0	8	0.0	0

TABLE CD- 8. MEAN PERCENTAGE OF PUPILS WHOSE FATHERS ARE WHITE COLLAR WORKERS, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-55405P)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	38.5	7012	12.7	361	32.9	1294	43.8	2271	39.9	2983	44.8	103
ALL PUBLIC SCHOOLS	36.6	5737	12.3	341	32.0	1160	42.2	1845	37.8	2310	43.9	81
K1-5,K1-6	38.4	1808	14.3	103	28.6	342	42.9	465	42.4	868	43.3	30
K1-7,K1-8,K1-9	26.7	506	8.1	54	29.5	64	35.0	127	26.0	254	20.7	7
6-8,7-8,6-9,7-9,8-9	42.2	1021	13.7	49	34.2	255	46.8	389	46.7	313	55.4	15
7-12	30.7	290	11.8	27	33.2	54	34.9	87	30.1	115	42.9	7
9-12,10-12	40.3	1326	18.2	39	35.6	332	44.5	578	40.0	364	42.9	13
K1-12	18.6	324	6.7	35	19.3	27	26.2	65	17.8	194	35.0	3
OTHER	34.3	462	10.6	34	29.5	86	35.8	134	38.7	202	52.5	6
ALL NON-PUBLIC SCHOOLS	47.4	1259	18.1	20	41.3	132	50.8	421	47.2	665	49.3	21
ALL CATHOLIC SCHOOLS	44.5	1074	16.1	14	37.7	118	47.8	366	44.2	557	51.3	19
K1-5,K1-6,K1-7,K1-8,K1-9	41.4	630	16.7	12	33.3	61	41.5	167	43.1	376	52.9	14
9-12,10-12	50.3	307	15.0	1	42.4	49	54.0	167	48.0	87	51.7	3
OTHER	45.4	137	10.0	1	43.1	8	48.5	32	45.1	94	39.5	2
ALL NON-CATH.,CHURCH REL.	57.9	85	12.7	3	65.0	8	65.9	19	57.5	53	30.0	2
ALL NON-CATH.,NON-CHURCH REL.	73.0	83	60.0	1	79.2	6	75.3	29	71.1	47	0.0	0
UNKNOWN	51.4	17	20.0	2	0.0	0	67.1	7	45.4	8	0.0	0
TYPE OF CONTROL UNKNOWN	30.2	16	0.0	0	18.0	2	24.0	5	37.1	8	30.0	1

TABLE CD- 9. MEAN SCHOOL IQ,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-554011)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) **** 96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	103.0	6671	90.2	320	99.5	1245	104.8	2174	104.7	2766	103.3	166
ALL PUBLIC SCHOOLS	102.2	5464	90.0	303	99.0	1109	104.1	1770	104.0	2149	102.3	133
K1-5,K1-6	102.5	1710	90.4	89	97.9	324	104.1	444	105.0	809	98.9	44
K1-7,K1-8,K1-9	99.3	457	89.6	48	98.5	61	101.1	118	100.7	216	100.9	14
6-8,7-8,6-9,7-9,8-9	103.6	989	89.2	48	99.4	236	105.8	374	106.1	305	106.2	26
7-12	101.8	282	89.1	26	100.7	49	104.6	86	103.1	108	100.9	13
9-12,10-12	102.8	1311	91.8	31	100.7	329	104.0	568	103.6	364	105.7	19
K1-12	100.7	301	89.3	34	99.8	25	101.4	59	102.6	178	104.8	5
OTHER	100.6	414	90.5	27	95.4	85	103.4	121	102.6	169	102.3	12
ALL NON-PUBLIC SCHOOLS	106.8	1194	94.8	17	103.3	134	107.7	399	107.3	612	107.3	32
ALL CATHOLIC SCHOOLS	106.0	1021	95.3	12	102.4	115	106.8	351	106.3	516	107.6	27
K1-5,K1-6,K1-7,K1-8,K1-9	104.6	581	96.4	10	98.8	60	105.3	154	105.3	339	107.6	18
9-12,10-12	108.6	305	90.0	1	107.1	47	108.6	164	109.8	87	107.5	6
OTHER	106.0	135	90.0	1	102.1	8	105.3	33	106.7	90	108.0	3
ALL NON-CATH.,CHURCH REL.	110.8	76	86.0	2	110.3	9	114.6	15	111.0	47	105.7	3
ALL NON-CATH.,NON-CHURCH REL.	113.6	79	108.0	1	108.9	9	115.0	25	114.1	43	104.0	1
UNKNOWN	106.1	18	93.5	2	90.0	1	109.7	8	108.0	6	106.0	1
TYPE OF CONTROL UNKNOWN	105.0	13	0.0	0	98.0	2	105.6	5	106.2	5	110.0	1

TABLE CD- 10. PROPORTION OF SCHOOLS WITH A CENTRALIZED SCHOOL LIBRARY, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT (CPS-554013A)

			**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N
ALL SCHOOLS	.836	7724	.841	384	.885	1459	.882	2436	.778	3198	.822	247
ALL PUBLIC SCHOOLS	.847	6299	.860	364	.891	1307	.896	1967	.784	2458	.833	203
K1-5,K1-6	.725	1968	.769	108	.786	374	.746	492	.686	928	.697	66
K1-7,K1-8,K1-9	.685	550	.764	55	.708	72	.787	136	.608	268	.737	19
6-8,7-8,6-9,7-9,8-9	.975	1123	.963	54	.989	280	.983	414	.955	336	.974	39
7-12	.975	314	.964	28	.948	58	.989	89	.992	121	.889	18
9-12,10-12	.990	1491	1.000	43	.992	386	.995	629	.977	394	1.000	39
K1-12	.916	335	.974	38	.931	29	.955	66	.888	197	1.000	5
OTHER	.672	518	.763	38	.722	108	.745	141	.584	214	.647	17
ALL NON-PUBLIC SCHOOLS	.783	1410	.500	20	.827	150	.821	464	.759	733	.767	43
ALL CATHOLIC SCHOOLS	.777	1204	.429	14	.836	128	.807	405	.751	619	.789	38
K1-5,K1-6,K1-7,K1-8,K1-9	.654	711	.333	12	.691	68	.608	186	.675	419	.692	26
9-12,10-12	.994	340	1.000	1	1.000	52	1.000	183	.979	96	1.000	8
OTHER	.863	153	1.000	1	1.000	8	.861	36	.846	104	1.000	4
ALL NON-CATH.,CHURCH REL.	.755	94	.333	3	.800	10	.950	20	.724	58	.333	3
ALL NON-CATH.,NON-CHURCH REL.	.857	91	1.000	1	.727	11	.871	31	.872	47	1.000	1
UNKNOWN	.952	21	1.000	2	1.000	1	1.000	8	.889	9	1.000	1
TYPE OF CONTROL UNKNOWN	.933	15	0.000	0	1.000	2	.800	5	1.000	7	1.000	1

TABLE CD- 11. PROPORTION OF SCHOOLS HAVING A SHOP WITH POWER TOOLS, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-554014)

			**** SCHOOL-COMMUNITY RACIAL CONTEXT **** (PERCENT OF PUPILS WHO ARE NEGRO)									
TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N	PROP	N
ALL SCHOOLS	.467	7682	.475	379	.581	1447	.538	2430	.362	3183	.461	243
ALL PUBLIC SCHOOLS	.554	6264	.493	359	.630	1295	.642	1964	.453	2446	.540	200
K1-5,K1-6	.017	1958	.019	108	.033	369	.014	491	.012	925	.015	65
K1-7,K1-8,K1-9	.338	547	.222	54	.542	72	.404	136	.270	267	.389	18
6-8,7-8,6-9,7-9,8-9	.930	1117	.944	54	.950	278	.947	415	.886	332	.974	38
7-12	.961	310	.893	28	.947	57	.966	89	.983	118	.944	18
9-12,10-12	.970	1484	.927	41	.963	383	.974	627	.975	394	.949	39
K1-12	.913	334	.868	38	.897	29	.938	65	.914	197	1.000	5
OTHER	.333	514	.444	36	.486	107	.340	141	.239	213	.235	17
ALL NON-PUBLIC SCHOOLS	.081	1402	.150	20	.147	150	.093	461	.056	729	.095	42
ALL CATHOLIC SCHOOLS	.046	1195	0.000	14	.094	128	.055	402	.031	614	.054	37
K1-5,K1-6,K1-7,K1-8,K1-9	.011	706	0.000	12	.015	68	.005	184	.014	417	0.000	25
9-12,10-12	.115	339	0.000	1	.192	52	.099	182	.094	96	.250	8
OTHER	.053	150	0.000	1	.125	8	.083	36	.040	101	0.000	4
ALL NON-CATH.,CHURCH REL.	.160	94	0.000	3	.200	10	.350	20	.103	58	0.000	3
ALL NON-CATH.,NON-CHURCH REL.	.326	92	1.000	1	.636	11	.323	31	.229	48	1.000	1
UNKNOWN	.619	21	1.000	2	1.000	1	.500	8	.556	9	1.000	1
TYPE OF CONTROL UNKNOWN	.500	16	0.000	0	1.000	2	.600	5	.375	8	0.000	1

TABLE CD- 12. MEAN EMPHASIS ON TYPING INSTRUCTION SCORE,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-554015)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) **** 96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	1.054	7704	1.073	383	1.168	1453	1.174	2434	0.909	3190	1.041	244
ALL PUBLIC SCHOOLS	1.094	6285	1.096	363	1.178	1302	1.190	1968	0.974	2451	1.075	201
K1-5,K1-6	0.438	1961	0.426	108	0.402	371	0.457	492	0.440	925	0.477	65
K1-7,K1-8,K1-9	0.495	550	0.393	56	0.704	71	0.471	136	0.448	268	0.842	19
6-8,7-8,6-9,7-9,8-9	1.017	1124	1.389	54	1.161	280	0.940	416	0.940	335	0.949	39
7-12	1.962	312	1.893	28	1.966	58	1.989	89	1.966	119	1.889	18
9-12,10-12	1.968	1490	2.000	43	1.948	386	1.979	628	1.972	394	1.897	39
K1-12	1.883	334	1.919	37	1.786	28	1.879	66	1.888	197	2.000	6
OTHER	0.839	514	1.216	37	0.870	108	0.830	141	0.765	213	0.800	15
ALL NON-PUBLIC SCHOOLS	0.874	1403	0.650	20	1.074	149	1.106	461	0.691	731	0.905	42
ALL CATHOLIC SCHOOLS	0.880	1198	0.357	14	1.102	128	1.132	403	0.680	616	0.892	37
K1-5,K1-6,K1-7,K1-8,K1-9	0.368	707	0.167	12	0.382	68	0.391	184	0.352	418	0.520	25
9-12,10-12	1.826	340	2.000	1	1.981	52	1.831	183	1.719	96	2.000	8
OTHER	1.146	151	1.000	1	1.500	8	1.361	36	1.049	102	1.000	4
ALL NON-CATH.,CHURCH REL.	0.717	92	0.667	3	0.667	9	0.842	19	0.672	58	1.000	3
ALL NON-CATH.,NON-CHURCH REL.	0.826	92	2.000	1	1.091	11	0.871	31	0.708	48	1.000	1
UNKNOWN	1.429	21	2.000	2	1.000	1	1.375	8	1.444	9	1.000	1
TYPE OF CONTROL UNKNOWN	1.000	16	0.000	0	1.500	2	1.200	5	0.875	8	0.000	1

TABLE CD- 13. MEAN PERCENTAGE OF 12TH GRADE GRADUATES GOING TO FOUR-YEAR COLLEGES, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-554019A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	36.1	2617	24.7	124	32.0	538	39.4	1006	36.2	891	39.7	58
ALL PUBLIC SCHOOLS	32.3	2136	23.9	119	30.3	476	35.1	779	31.7	713	36.9	49
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	32.0	304	25.3	26	30.7	56	34.9	88	31.5	117	35.1	17
9-12,10-12	33.5	1415	26.1	41	30.4	371	35.9	598	33.4	378	35.6	27
K1-12	28.0	327	22.5	37	31.2	28	27.6	65	28.2	193	54.0	4
OTHER	30.9	90	19.2	15	27.7	21	37.5	28	33.3	25	31.0	1
ALL NON-PUBLIC SCHOOLS	53.3	477	42.8	5	46.0	60	54.1	226	54.9	177	55.4	9
ALL CATHOLIC SCHOOLS	50.3	383	53.0	2	42.9	52	51.8	188	50.6	133	58.6	8
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	51.9	315	75.0	1	43.5	47	51.9	171	55.5	90	59.8	6
OTHER	43.0	68	31.0	1	37.4	5	50.3	17	40.5	43	55.0	2
ALL NON-CATH.,CHURCH REL.	63.5	27	10.0	1	70.0	1	58.6	10	72.7	14	30.0	1
ALL NON-CATH.,NON-CHURCH REL.	70.1	55	92.0	1	65.7	7	69.2	21	71.1	26	0.0	0
UNKNOWN	47.8	12	6.0	1	0.0	0	64.1	7	29.7	4	0.0	0
TYPE OF CONTROL UNKNOWN	13.0	4	0.0	0	13.5	2	25.0	1	0.0	1	0.0	0

TABLE CD- 14. MEAN PERCENTAGE OF MALE FORMER 10TH GRADERS WHO DROPPED OUT, BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT (CPS-554020A)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT **** (PERCENT OF PUPILS WHO ARE NEGRO)									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	9.0	2348	17.5	116	12.3	474	7.7	899	7.2	812	9.8	47
ALL PUBLIC SCHOOLS	9.6	2019	18.0	111	12.7	438	8.3	745	7.7	686	10.8	39
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	8.3	287	17.1	26	9.1	51	7.5	85	6.7	114	7.8	11
9-12,10-12	10.0	1334	21.3	36	13.6	347	8.6	571	7.6	357	10.2	23
K1-12	9.3	320	16.4	35	8.7	26	7.9	64	8.2	191	22.2	4
OTHER	9.9	78	15.6	14	11.9	14	6.4	25	9.2	24	10.0	1
ALL NON-PUBLIC SCHOOLS	4.7	325	6.0	5	6.3	34	4.3	153	4.7	125	5.3	8
ALL CATHOLIC SCHOOLS	4.2	251	2.5	2	6.3	27	3.8	123	4.2	92	5.4	7
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	4.4	202	5.0	1	5.4	23	3.6	109	5.1	63	5.7	6
OTHER	3.7	49	0.0	1	11.5	4	4.7	14	2.2	29	4.0	1
ALL NON-CATH.,CHURCH REL.	6.6	24	10.0	1	5.0	1	9.0	8	5.2	13	4.0	1
ALL NON-CATH.,NON-CHURCH REL.	6.3	40	0.0	1	6.2	6	6.1	18	7.2	15	0.0	0
UNKNOWN	6.1	10	15.0	1	0.0	0	5.3	4	5.0	5	0.0	0
TYPE OF CONTROL UNKNOWN	13.7	4	0.0	0	22.5	2	10.0	1	0.0	1	0.0	0

TABLE CD- 15.. MEAN PERCENTAGE OF FEMALE FORMER 10TH GRADERS WHO DROPPED OUT,
BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

(CPS-554020B)

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-55 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	7.5	2333	16.2	118	10.3	463	6.4	894	5.9	812	7.4	46
ALL PUBLIC SCHOOLS	8.2	1999	16.7	113	10.8	427	7.1	737	6.5	683	8.2	39
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	7.0	284	13.7	25	7.8	51	6.1	83	5.9	114	6.3	11
9-12,10-12	8.4	1320	19.5	39	11.5	337	7.3	565	6.3	356	6.9	23
K1-12	8.3	317	17.0	35	7.5	25	7.5	64	6.8	189	21.2	4
OTHER	9.3	78	13.8	14	10.6	14	6.0	25	9.5	24	5.0	1
ALL NON-PUBLIC SCHOOLS	3.2	330	4.0	5	4.7	34	3.2	156	2.7	128	3.0	7
ALL CATHOLIC SCHOOLS	2.7	256	1.0	2	4.8	29	2.8	125	1.9	94	2.8	6
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	2.7	207	2.0	1	4.4	25	2.8	111	1.9	65	3.4	5
OTHER	2.6	49	0.0	1	7.8	4	3.1	14	1.8	29	0.0	1
ALL NON-CATH.,CHURCH REL.	4.1	24	10.0	1	5.0	1	4.6	10	3.0	11	4.0	1
ALL NON-CATH.,NON-CHURCH REL.	5.4	39	0.0	1	3.8	4	4.9	16	6.6	18	0.0	0
UNKNOWN	4.6	11	8.0	1	0.0	0	4.6	5	4.0	5	0.0	0
TYPE OF CONTROL UNKNOWN	11.0	4	0.0	0	16.0	2	12.0	1	0.0	1	0.0	0

TABLE CD- 16. MEAN PERCENT OF FORMER 10TH GRADE ENROLLEES GOING TO ANY FORM OF HIGHER ED., BY TYPE OF SCHOOL AND SCHOOL-COMMUNITY RACIAL CONTEXT

TYPE AND SUBTYPE OF SCHOOL	ALL SCHOOLS		**** SCHOOL-COMMUNITY RACIAL CONTEXT (PERCENT OF PUPILS WHO ARE NEGRO) ****									
			96-100 NEGRO		5-95 NEGRO		1-4 NEGRO		0 NEGRO		UNKNOWN	
	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N	MEAN	N
ALL SCHOOLS	55.9	2101	36.1	74	50.8	448	59.2	856	57.1	676	58.8	47
ALL PUBLIC SCHOOLS	52.9	1777	34.9	71	49.3	409	55.9	689	54.0	566	56.8	42
K1-5,K1-6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
6-8,7-8,6-9,7-9,8-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
7-12	51.1	251	36.2	16	49.6	44	53.5	82	50.7	95	62.0	14
9-12,10-12	54.0	1245	38.2	32	48.8	330	56.8	533	56.4	326	55.2	24
K1-12	49.5	212	31.2	16	59.6	16	51.7	50	49.6	127	50.0	3
OTHER	50.2	69	25.4	7	48.5	19	52.7	24	58.7	18	43.0	1
ALL NON-PUBLIC SCHOOLS	72.5	322	64.7	3	66.8	38	73.2	166	73.3	110	75.6	5
ALL CATHOLIC SCHOOLS	72.7	279	87.0	1	67.9	36	72.7	149	74.1	89	83.7	4
K1-5,K1-6,K1-7,K1-8,K1-9	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
9-12,10-12	74.2	241	87.0	1	69.4	35	73.5	136	77.4	66	87.3	3
OTHER	63.2	38	0.0	0	15.0	1	63.8	13	64.5	23	73.0	1
ALL NON-CATH.,CHURCH REL.	76.7	15	67.0	1	0.0	0	80.2	5	79.9	8	43.0	1
ALL NON-CATH.,NON-CHURCH REL.	71.2	20	0.0	0	46.5	2	81.7	8	67.8	10	0.0	0
UNKNOWN	58.4	8	40.0	1	0.0	0	68.0	4	51.7	3	0.0	0
TYPE OF CONTROL UNKNOWN	62.0	2	0.0	0	89.0	1	35.0	1	0.0	0	0.0	0

Appendix D. Validity of the Principals' Estimates of the Social Class Context of Schools.

In this report the sociocultural context of schools has been measured by the joint classification of three variables -- the region in which the school is located, its residence area, and the social class composition of the parents of its pupils. The regional classification for the 7,771 school examined was quite clear-cut and involved merely a collapsing of the nine standard geographical divisions of the U. S. Bureau of the Census into five region codes. The coding of residence area was slightly more complex, involving first the identification of the Standard Metropolitan Statistical Area (SMSA) code of the Bureau of the Census for each member of the sample of pupils from each school, and then assigning the dominant pupil code to each particular school. As noted in Chapter Nine this process led to an unambiguous classification for over 90 percent of the schools.

Each of these procedures was relatively straightforward and suggests little reason to question the validity of these two measures of the sociocultural context of the schools. However, the approach with respect to the social class context of the schools is far more indirect and would seem to require further documentation as to its validity with respect to the purposes to which it was put in this report.

To measure the social class context of the 7,771 schools the principal of each school was asked to estimate the percent of pupils in his school who "have a father (or guardian) who is a white-collar worker (professional, managerial, clerical, or sales worker, etc.)"[1] The intent in asking such a general question was not to characterize the exact percentage of such pupils in each school, but rather to obtain an estimate which when reduced to a limited number of rough categories (generally two, but occasionally four) would provide sufficient discrimination among the schools in terms of their social class context to provide a valid test of the working hypothesis offered in Chapter Eight. Although such a procedure of "rough estimates" has been used before and has been validated by comparing the estimates of 102 urban school principals with census tract data,[2] some readers of this report may question the ability of school principals to provide estimates which are sufficiently accurate to make the desired discriminations. Therefore, to explore further the validity of the school principals' estimates of the social class characteristics of their pupils an analysis was performed comparing the principals' estimates with those available for a sample of their pupils from direct ennumerations made during the October 1965 Current Population Survey (CPS) of the U. S. Bureau of the Census.[3]

Preliminary Results

In designing the necessary analysis it was thought useful to evaluate not only the principals' ability to estimate the social class composition of their schools, but also their racial compositions. Since the referent of the term "Negro" is probably more widely understood than is that for the term "white collar," and since in 1965 the racial composition of American schools was a frequent topic in both popular and professional discourse, school principals are likely to be more accurate estimators of racial composition than of social class composition. This expectation was borne out by our preliminary analysis. When the principals' reports of the percent of pupils in their schools who "are Negro"[4] were multiplied by the number of pupils in each school, summed, and then divided by the total number of pupils in these schools, it was observed that 12.0 percent of the pupils in this national sample of American public and private schools were reported by the school principals to be Negro. The percent of Negro pupils in these same schools estimated from the CPS sample was also 12.0 percent. Thus, in the aggregate, the racial estimates provided by the school principals and by the CPS enumeration are identical.

This is not the case with respect to the percent of pupils who are estimated to be from white-collar families. Here, in the aggregate, the principals estimates yield a figure of 41.0 percent and that of the CPS enumeration 35.2 percent. Thus it seems that the principals are very likely using a definition of "white collar" which is more inclusive than that utilized by the Bureau of the Census. Does this fact necessarily invalidate the principals' estimates? We think not for if the principals' estimates are uniformly high they can still serve as valid discriminators among schools of differing social class composition. One way to explore this question further is to examine how the two estimates -- those of the principals and of the CPS -- actually discriminate in terms of other variables. To do this we have chosen the variables of region and residence (metropolitanization) -- the two other sociocultural contexts important in this report.

Detailed Results

Racial Estimates. Table D-1 presents the percent of pupils who are Negro -- according to both the principals and the CPS -- by region, by residence, and by region and residence simultaneously. Because of sampling errors in the CPS data one would not expect the percentages obtained from the two sources to agree completely, even if the principals were providing perfectly accurate estimates. It can be noted in Table D-1 that in fact they do not agree exactly. However, the rank ordering of the three residence areas is identical for the two sources. Thus according to estimates from the CPS data the central cities have the largest percentage of pupils who are Negro (24.3), followed by the non-metropolitan area (10.3), and then the rings (4.5). The comparable percentages computed from the principals' estimates are 22.9, 8.3, and 4.8, respectively (Table D-1).

Table D-1. Percent of Pupils Who are Negro, Computed from the Reports of CPS Enumerators (E) and School Principals (P), by Region and Residence.

Region	Residence											
	Non Met			Ring			Central City			All Residences		
	E	P	P-E	E	P	P-E	E	P	P-E	E	P	P-E
Northeast	3.9	2.8	-1.1	2.8	4.2	+1.4	18.0	20.4	+2.4	7.7	11.1	+3.4
West	1.5	3.1	+1.6	1.6	4.8	+3.2	16.6	16.4	-0.2	6.0	8.6	+2.6
North Central	2.4	2.0	-0.4	2.9	3.1	+0.2	25.4	24.2	-1.2	8.7	10.0	+1.3
South	22.4	18.0	-4.0	11.8	8.4	-3.4	35.6	32.2	-3.4	22.6	19.6	-3.0
All Regions	10.3	8.3	-2.0	4.5	4.8	0.3	24.3	22.9	-1.4	12.0	12.0	0.0

A similar consistency can be noted when residence areas are compared within each of the four regions. However, comparisons by region, and by region within the three residence areas, although showing a general consistency between the CPS and principals' estimates, reveal some inconsistencies. No doubt some of this lack of consistency is attributable to the fact that the percentage of Negro pupils in three of the four regions is rather similar thus making reversals in ranking due to sampling errors highly probable.

Social Class Estimates. The above results with respect to the percent of pupils estimated from CPS data and by the school principals to be Negro can serve as a rough standard by which to evaluate comparable estimates with respect to the percent of pupils who are from white-collar families. Table D-2 presents these results. Although the principals' estimates are generally higher than those derived from the CPS data, the rankings of the regions and residence areas are quite consistent between the two approaches. For example, the rank order of the three residence areas, both in the aggregate and within each of the four regions, is identical for the two sources. Similarly, the ranking of the four regions agrees perfectly in the aggregate and within one of the three residence areas (non-metropolitan). In the other two residence areas the ranking by region deviates only slightly between the two sources of estimates. Again inconsistencies generally occur where the true difference between two regions is likely to be very small.

Summary and Implications

In order to offer some validation for the principals' estimates of the social class context of the schools, a comparison has been made between their estimates and those obtained from a census enumeration in October 1965 of a sample of pupils from these same schools. Although the principals' estimates of the percent of pupils in their schools who come from white-collar families consistently exceeds similar estimates obtained from enumerations by the Current Population Survey of the U. S. Bureau of the Census, the two types of estimates vary in a similar fashion according to region and residence area. This similarity is particularly striking when it is compared with a comparable analysis of regional and residence variations in estimates of the percent of pupils who are Negro. On the basis of these results there would seem to be little doubt that the principals' estimates are sensitive to variations in social class context by region and by residence, and thus have sufficient validity to provide the types of discriminations required for a test of the working hypothesis offered in Chapter Eight of this report.

Notes and References

1. See Appendix B for a general discussion of the rationale behind this measurement approach and for the School Questionnaire containing this question.

Table D-2. Percent of Pupils from White Collar Families, Computed from the Reports of CPS Enumerators (E) and School Principals (P), by Region and Residence.

Region	Residence											
	Non Met			Ring			Central City			All Residences		
	E	P	P-E	E	P	P-E	E	P	P-E	E	P	P-E
Northeast	30.2	36.8	+5.4	46.3	49.0	+2.7	31.2	37.2	+6.0	37.8	42.4	+4.6
West	32.1	38.1	+6.0	46.1	47.0	+0.9	41.5	45.2	+3.7	40.9	45.4	+4.5
North Central	29.1	27.6	-1.5	46.8	48.3	+1.5	30.0	36.1	+6.1	35.6	39.5	+3.9
South	22.7	27.0	+6.3	39.8	45.9	+6.1	30.5	39.3	+8.8	29.2	37.2	+8.0
All Regions	27.2	30.8	+3.6	45.0	47.8	+2.8	32.6	39.1	+6.5	35.2	41.0	+5.8

2. See Robert E. Herriott and Nancy H. St. John, Social Class and the Urban School (New York: John Wiley and Sons, Inc., 1966), p. 19.

3. See Chapter Nine for a more complete discussion of the relationship of this study to the October 1965 Current Population Survey.

4. See Appendix B, School Questionnaire, Item 5i.